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LEADERSHIP SKILLS, PROMOTING FLOW AND GENERATING PROFIT: A STUDY OF
MILLENNIAL MANAGERS THROUGH GAMIFICATION

by

Junior Ali Badibanga

A dissertation submitted to the Department of Leadership, School Counseling, & Sport

Management

in partial fulfillment of the requirements for the degree of

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Unpublished work c Junior Ali Badibanga

The dissertation of Junior Ali Badibanga is approved:

Dr. Matthew Ohlson, Committee Chair

Date

Dr. Anne Swanson,

Date

Dr. Daniel Dinsmore,

Date

Dr. Joshua Merchant,

Date

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Abstract

An increased number of organizations are shifting away from traditional hierarchical, command and control business strategies which focus solely on generating profit to focusing on both people and profit. In this study, Csíkszentmihályi's flow state (1975/2000) is considered to correspond with the people side of the social enterprise model, where organizations focus on both people and profit. Csíkszentmihályi (1990) describes the flow experience as a mental state which occurs when a person is motivated and fully immersed in an activity, resulting in feelings of energized focus and profound enjoyment. The current study analyzed secondary data from 1,184 millennial managers that played FLIGBY, a business simulation gamifying various leadership skills, flow in the workplace, and related profit outcomes. The results demonstrated strong collinearity between the eight leadership skills of interest, resulting in the factor load of a new singular variable. The new variable was found to have a predictive relationship between promoting flow and generating profit.

Chapter I: Introduction

Organizations are facing increased challenges as the result of a dynamic, global economy and a large volume of social influences. To remain competitive, organizations must respond to the needs of its greater stakeholder network by focusing on both profit-making and people. Another way of stating this is, organizations must find the balance between generating profit while focusing on the needs of its people. For some companies, this will require a shift in business strategy to model a social enterprise. In the corporate sector, modeling a social enterprise may focus on new ways of working to meet employee needs while generating profit. In areas such as higher education, for instance, a social enterprise model may focus on providing facilities to partner with community stakeholders to support environmental goals. Considering the variety of applications that make up a social enterprise, it is specifically defined in this study as “an organization whose mission combines revenue growth and profit-making with the need to respect and support its environment and stakeholder network” (Volini, Schwartz, Roy, Hauptmann, Van Durme, Denny, & Bersin, 2019, p. 2).

Accordingly, Mihaly Csíkszentmihályi’s flow state model (1975/2000) aligns with the social enterprise movement. Csíkszentmihályi (1975) identified flow as an off-shoot to creativity while studying thousands of individuals across a variety of professions. Flow has since been a focal research construct in many areas, including sports psychology, creativity, art, and in the workplace. The flow experience is the mental state which occurs when a person is motivated and fully immersed in an activity, resulting in feelings of energized focus and profound enjoyment – the flow experience is thought to cultivate overall happiness and well-being (Csíkszentmihályi, 1990). Moreover, flow can double your productivity—researchers have found that flow enhances performance in teaching, learning, athletics, arts, and at work

(Noseworthy, Thelwell, & Weston, 2017). Researchers have also found that employees typically achieve a flow state for 5 percent of the day. Consider if this percentage increased to 15, employees could potentially improve their work performance (Marer et al., 2015). Rationally, increasing the state of flow for employees is one ideal approach for social enterprise leaders focusing on their internal stakeholders. As stated by Csíkszentmihályi (Buzady, 2016), the best thing managers can do for their employees is to help them to generate states of flow in their work.

The purpose of this study is to determine the effect of a set of leadership skills on generating both flow and profit. More specifically, this study focuses on millennial managers as the target group of interest. Interestingly, millennials make up the largest population of the workforce, and they are occupying an increasing number of leadership roles; however, in their (2016) Deloitte Millennial Survey, researchers found that a majority of millennials did not believe that companies were fully developing their leadership skills. Successful social enterprises will need to develop their people managers with the leadership skills to meet the needs of employees while generating profit for the business.

Statement of the Problem

Profound shifts are taking place amongst organizations. Changes in strategies and cultures are the result of a dynamic global economy and the various social influences on organizations. To compete successfully, organizations must cultivate profit while satisfying the needs of its entire stakeholder network. No longer can the business strategy focus solely on profits and meeting the needs of shareholders. Instead, organizations must also focus on the needs of internal stakeholders – the needs of their employees (Volini et al. 2019).

In recent years, the business landscape has seen a tremendous rise in the social enterprise – organizations that combine profit-making and altruism as part of their mission (Eldar, 2017).

In their (2019) Human Capital Trends report, Volini et al. found that, over time, social enterprises have become more important to organizations and that although many CEOs recognize its importance, they must also acknowledge leading a social enterprise is more than corporate social responsibility (CSR) and redefining mission statements. Leaders of social enterprises achieve success by balancing both profit growth and the needs of its people.

Concurrently, millennials, the largest generation in the workforce, are entering into more and more leadership, positioning the group as a pivotal catalyst to influence the success of a social enterprise model (Loudenback, 2016). In 2016, millennials became the largest cohort in the workforce, making up 35 percent of the U.S. labor market, and by 2030 that number is projected to reach 75 percent (Fry, 2018; Williams, 2015). There is no shortage of research discussing workplace differences between millennials and other generations. Scholars cite generational differences in areas of workplace engagement, satisfaction, motivation, and values, and they all have received close scrutiny in the literature (Burke, 2008; Costanza, Badger, Fraser, Severt & Gate, 2012; What Millennials Want, 2016).

Central to an organization's focus on its people is the notion of engagement in the workplace. A problem in today's workplace is 85% of global employees are disengaged, and research finds that managers account for "at least 70% of the variance in employee engagement scores across business units" (Royal, 2019; The 2019 Employee Engagement Report, 2019). The construct of engagement has been linked to positive organizational outcomes including productivity, financial performance, and long-term success (Saks, 2006; Catteeuw, Flynn, & Vonderhorst, 2007; Corporate Leadership Council, 2016). A closely tied alternative approach to

engagement is through Mihály Csíkszentmihályi's (1975) theory of flow. Flow is positively related to engagement and organizational performance and has long been established in the literature as a construct worthy of research in the workplace (see Bakker 2008; Demerouti, Hofstett & Vivoll, 2009; 2006; Zito, Bakker, Colombo, & Cortese, 2015).

The research on flow has found a positive relationship between flow and servant leadership, flow and employee wellbeing, as well as flow as a mediator between servant leadership and employee wellbeing (Jin, et al., 2017). Furthermore, Marer, Buzady & Vecsey (2015) identified balancing skill, feedback, applying personal strengths, and strategic thinking as leadership skills that help generate flow. Nonetheless, there is scant research about the relationship between leadership skills and promoting flow as well as leadership skills and generating profit growth; specifically, using gamification as an instrument to capture these constructs.

Purpose of the Study

The purpose of this study is to measure the effect of leadership skills related to promoting flow and to, separately, measure the effect of leadership skills and generating profit. This quantitative study examines secondary data from millennials managers that played a flow leadership simulation called FLIGBY. The independent variables consist of eight out of 29 leadership skills captured in FLIGBY. The dependent variables, also obtained in FLIGBY, include promoting flow and generating profit. Chapter 3 provides a greater depth of explanation about the FLIGBY.

Research Questions and Hypotheses

In cooperation with Csikszentmihalyi and interviews with business leaders, FLIGBY's creators proposed four leadership skills most related to flow: balancing skills; feedback; applying

personal strengths and strategic thinking (Marer et al., 2015). It is therefore hypothesized that FLIGBY's leadership skills, including *balancing skills*, *feedback*, *applying personal strengths*, and *strategic thinking*, will be positively associated with promoting flow. More broadly, FLIGBY's 29 leadership skills have been mapped to align with the five categories of the Executive Core Qualifications (ECQ): *leading change*; *leading people*; *results-driven*; *business acumen*; and *building coalitions* (Marer et al. 2015, & omp.gov, 2019). The business acumen ECQ was identified as most inclusive of the qualifications that may be related to generating profit. The U.S. Office of Personnel Management (2019) defines the business acumen ECQ as those core qualifications that involve managing human, financial, and information resources strategically. Marer et al. (2015) mapped the following FLIGBY leadership skills to the business acumen ECQ: *analytical skill*; *information gathering*; *organizing*; and *delegating*. On related logic, it is hypothesized that FLIGBY's leadership skills, including analytical skill, information gathering, organizing, and delegating, will be positively related to generating profit.

With a focus on millennial managers as the target population, the current study's hypotheses are based on the cooperation between Marer et al. along with Csikszentmihalyi and his interview with business leaders. The research questions, the null hypothesis (H_0) and the alternative hypothesis (H_a) for this study are as follows:

(Research Question 1): What is the effect of leadership skills on promoting flow amongst employees in FLIGBY?

- H_{a1a} : Balancing skills has a statistically significant positive relationship with promoting flow amongst employees.
- H_{a1b} : Feedback has a statistically significant positive relationship with promoting flow amongst employees.

- *H_{a1c}*: Applying personal strengths has a statistically significant positive relationship with promoting flow amongst employees.
- *H_{a1d}*: Strategic thinking has a statistically significant positive relationship with promoting flow amongst employees.

(Research Question 2): What is the effect of leadership skills on generating profit in FLIGBY?

- *H_{a2a}*: Analytical skill has a statistically significant positive relationship with generating profit.
- *H_{a2b}*: Information gathering has a statistically significant positive relationship with generating profit.
- *H_{a2c}*: Organizing has a statistically significant positive relationship with generating profit.
- *H_{a2d}*: Delegating has a statistically significant positive relationship with generating profit.

Significance of the Study

Organizations are shifting from a previous, hierarchical, "command and control" approach to those of the social enterprise where the focus is on both profit and purpose through meeting the needs of all stakeholders. In the workplace, millennials have challenged organizations to focus on profit and purpose as opposed to just profits. The generation is on the cusp of surpassing baby boomers as the largest living generation in the United States, and in 2016, millennials became the largest generation in the workforce making up 35% of the U.S. labor force (Fry, 2018). As a higher number of baby boomers retire, millennials are in the pipeline of succession planning for leadership roles. With more and more organizations shifting

towards social enterprise models, the need to develop the largest generation into leaders that balance profit and people's needs are critical (Volini et al., 2019).

One approach to fulfilling the needs of the organization's employees is by promoting a flow work environment. Mihály Csíkszentmihályi (1975). Since a large portion of our time is spent at work, it is logical to believe that our jobs, to a significant extent, determine how we feel in our lives – increased flow at work has been associated with greater engagement and satisfaction at work (Jin Liu, & Chen, 2017). It is, therefore, logical to rationalize that managers can play an immense role in creating a work environment where employees experience increased states of flow. By taking a balanced approach of focusing on both promoting (increasing) flow and generating profit, leaders of social enterprises can achieve the success of fulfilling multiple interests. In the game FLIGBY, flow promoting leadership creates organizational success by achieving a balance between the business' key performance indicators and the needs of stakeholders both inside and outside of the organization. As such, this study aims to examine the performance of millennial leaders in the gamification of flow; specifically, by testing the effect of the relationship between the hypothesized leadership skills and promoting flow and generating profit in FLIGBY.

The present study is significant as it contributes to the scant research about leadership skills, promoting flow, and generating profit. What is also unique in this study, is it fills a gap in the literature using gamification as the instrument that captures leadership skills, promoting flow, and generating profit. Implications for this research derive a framework that can be applied, conceptually, across a variety of industries. For example, talent management and organizational development practitioners can develop leadership competency models that emphasize a social enterprise model for corporations, educational institutions, and non-profit organizations. De

Freitas and Routledge's (2013) review of the literature aligns with the suggested implications, to leverage the design of leadership models through testing in a gaming environment.

Definition of Key Terms

Analytical Skill: the readiness to visualize, articulate, and solve complex problems and concepts and make decisions that are sensible based on the available information (FLIGBY Leadership Skillset, 2019).

Applying Personal Strengths: recognizing and applying personal strengths is the readiness to discover and to put to good use those individual strengths of others that are not immediately obvious.

Balancing Skills: the readiness to maintain the same importance between things, considering them in the same way.

Business Acumen: This core qualification involves the ability to manage human, financial, and information resources strategically.

Delegating: the readiness to confer functions or powers on another person so he or she can act on behalf of the manager.

Feedback: the information to employees regarding their performance, for which they can take action.

FLIGBY: the official Flow-program for decision-makers by Professor Mihaly Csikszentmihalyi and ALEAS Simulations. FLIGBY's leadership development program combines the video-game learning experience with sophisticated, benchmark-based competence assessment (Marer et al., 2015).

Flow: a mental state which occurs when a person is motivated and fully immersed in an activity, resulting in feelings of energized focus and profound enjoyment (Csíkszentmihályi, 1990).

Generating Profit: The ability to increase profitability for a business

Information Gathering: the readiness to collect adequate information to perform the next step based on this information.

Millennials: individuals belonging to a generation, born between 1981 to 1996 (Fry, 2018).

Organizing: the readiness to initiate, arrange, and manage several elements into a purposeful structure.

Promoting Flow: Increasing the state of flow for employees (specifically in the workplace as it relates to this study)

Social Enterprise: an organization whose mission is to combine both profit growth and the needs of its stakeholder network as well as the environment

Stakeholder Network: The internal and external people and groups that influence or are affected by an organization's objectives (Freeman, 1984).

Strategic Thinking: helps managers to set goals, to determine priorities, to review policy issues, and to perform long term planning.

Chapter Summary

More than ever, it is critical for organizations to focus on their people – while it's undoubtedly crucial for organizations to also focus on generating profit. Millennials that are people managers are an ideal cohort for organizations to develop as leaders of their social enterprise. Flow is a highly researched construct which can improve the workplace experience of employees and has been associated with positive organizational outcomes. As such, this study

brings together the role of millennials as managers in the workplace and employee engagement (experienced as flow) and the leadership skills that can be harnessed to generate profits. The findings of this study will contribute to frameworks for leadership development in corporations, educational institutions, and non-profit organizations.

Chapter II: Literature Review

Introduction

As organizations strive to remain competitive, many are undergoing changes in strategy and culture-shifting from traditional "command and control" hierarchies to leadership practices that empower and focus on its people (Volini, Schwartz, Roy, Hauptmann, Van Durme, Denny, & Bersin, 2019). Concurrently, millennials, the largest and most diverse generation in the workforce, continue to play an influential role in challenging organizations to focus on profits and purpose versus only profits (Deloitte Millennial Survey, 2018). As the number of millennials occupying leadership roles increases, organizations need to equip these leaders with training and development that serves the bottom-line objectives of the business through financial performance and a focus on its people (Fry, 2018).

One way in which today's organizations focus on their people is through engagement in the workplace. Employee engagement has been linked to positive organizational outcomes, including productivity, financial performance, and long-term success (Saks, 2006; Catteeuw, Flynn, & Vonderhorst, 2007; Corporate Leadership Council, 2016). Flow is a similar and closely tied alternative approach to engagement. Flow in the workplace has been established in the literature, with scholars having identified positive relationships between flow and organizational performance (Zito, Bakker, Colombo, & Cortese, 2015). However, a gap exists in the literature in the study of flow through gamification.

This study contributes to the research on flow and leadership by studying a cohort of millennial managers through the gamification of a flow-based leadership simulation called FLIGBY (Marer et al., 2015). First, the literature will review millennials and the workplace values and attributes that characterize the generation. Second, the literature reviews the construct of flow, outlining the theory's framework, its application to the workplace, and its

basis for this study. Third, the literature reviews leadership development, emphasizing the use of gamification as a tool for engaging millennials in leadership training and assessment; FLIGBY, the flow-based leadership simulation is discussed as a basis for the study.

Millennials

Millennials also are known as Generation Y and nicknamed the digital natives, have been referred to as those born between a span of years, dating as far back as 1976 up to 2000 (Gentry, Griggs, Deal, Mondore, & Cox, 2011; Farrell & Hurt, 2014). In previous literature, millennials, the most studied generation, have been defined as those individuals born between 1980 and 2000 (Caraher, 2015; Durkin, 2010; Raines, 2002; Taylor, 2014; Emmons, 2019). Over the past decade, Pew Research has studied millennials, most recently redefining the age range for millennials as those born between 1981 and 1996 (Dimock, 2019). For this study, millennials are defined as those individuals born between 1981 and 1996. Furthermore, Pew Research estimates that millennials are on the cusp of surpassing baby boomers as the largest living generation in the United States. In 2016 millennials became the largest generation in the workforce, making up 35 percent of the U.S. labor force. The U.S Bureau of Labor Statistics estimates that millennials will make up 75 percent of the U.S. workforce by 2030 (Fry, 2018; Williams, 2015).

Having grown up surrounded by technology, millennials are used to accessing large amounts of information instantly, uniquely shaping their workplace values and expectations (Burke, 2008; Manning, Keiper & Jenny, 2017). They are synonymous with technology, earning them the nickname, digital natives. At least two-thirds of this generation operated a computer before the age of five. Not only do they communicate differently, but the digital natives are accustomed to having direct and immediate access to mass amounts of information (Howe &

Strauss, 2003; Lancaster & Stillman, 2010; Manning, Keiper & Jenny, 2017). As a result, how millennials experience and interact inside organizations has had profound influences on the workplace (Hershatzer and Epstein, 2010). According to Gallup's (2016) *How Millennials Want to Live and Work Report*, millennials have challenged and altered the social fabric of the world, influencing the world more decisively than previous generations. They are not only interested in the job, but how the organization provides them with opportunities to be their best.

There is no shortage of research discussing the workplace differences between millennials and other generations (Costanza, Badger, Fraser, Severt & Gate, 2012). This generation processes information and communicates differently. They expect open communication from leadership, including that about matters typically reserved for senior members (Society for Human Resource Management [SHRM], 2009). Compared to previous generations, millennials expect more communication with their supervisors as well as more significant positive and affirming engagement (Myers and Sadaghiani, 2010). The cohort carries a high value for self-expression, and they expect to succeed, given that they put forth hard work and effort (Taylor & Keeter, 2010). Traditional organizational values such as commitment, dedication, and loyalty carry different meanings for millennials than they have previously for members of generation X and baby boomers (Winter and Jackson, 2014). Millennials want 'coaches' instead of 'bosses,' challenging traditional command and control hierarchical structures. Rather than annual reviews, they prefer continuous feedback and to maximize their strengths over fixing their weaknesses (How Millennials Want, 2016). Often, millennials are associated with workplace values and characteristics including self-centered, needing flexibility and instant gratification, technology literate and synonymous with social media, team-oriented, valuing career options, and expecting a work-life balance from their organizations (Taylor & Keeter,

2010; Hagemann & Stroope, 2013). One could argue that millennials behave as consumers at work, given their immediate access to research a vast number of opportunities about other jobs and companies.

One area in which millennials differ significantly from previous generations is in their educational achievement. Millennials are the most educated generation in American History (Graf, 2017). According to Graf (2017), female millennials are 27 percent more likely than their predecessors to have a bachelor's degree, while millennial males are 21 percent more likely than their predecessors to have a bachelor 's degree and female millennials are 6 percent more likely than their male counterparts to have received a bachelor's degree. Most recently, in 1980, baby boomer males had outpaced their female counterparts with a 3 percent greater likelihood to have obtained a bachelor's degree. Today, 63 percent of millennial women are employed compared to 38 percent in 1963, and 68 percent of millennial men are employed compared to 78 percent in the three previous generations (Fry, Igielnik & Patten, 2018). As a result of their educational achievements, it's no surprise that millennials are driven by purpose and development. Although organizational leaders recognize this about millennials, they have not necessarily solved for it as 55 percent of millennials are not engaged, and 60 percent are open to a different job opportunity. This is a problem as turnover costs for millennials are estimated at more than \$30 billion annually (How Millennials Want, 2016).

The shared experiences of millennials have raised interest in their nature, characteristics, and the impact these generational differences have in the workplace (Burke, 2008; Costanza, Badger, Fraser, Severt & Gate, 2012). Straus and Howe (1991) defined a generation as “a special cohort-group whose length approximately matches that of a basic phase of life, or about twenty-two years” (p. 34). According to Noble and Schewe (2003) and Twenge et al. (2000),

shared experiences that makeup generations include historical, social and cultural events that influence attitudes, values and personality characteristics; however, it is essential to note and distinguish differences in the impact of historical events based on individual locations and experiences. For example, millennials growing up in the United States would have experienced events such as September 11th differently than those millennials growing up in India, China, or Brazil (Parry & Urwin, 2010).

Theoretical Framework: Flow

Flow theory was developed by Hungarian psychologist, Mihály Csíkszentmihályi (1975), as an off-shoot to creativity while he studied thousands of creative individuals in various professions. Csíkszentmihályi (1975) found these individuals intrinsically motivated, enthusiastic, and hyper-focused in their work; as such, he named the experience, "flow." Flow has been defined as a "the holistic sensation that people feel when they act with total involvement with their activity" (Csíkszentmihályi, 1975, p. 9) and as a mental state a person achieves when performing an activity in which they are fully immersed in a feeling of energized focus, full involvement, and enjoyment. In his book, *Good Business* (2003) Csíkszentmihályi identified the following preconditions to enter a state of flow: (a) balance between challenges and skills; (b) clearly outlined goals; (c) immediate and clear feedback; (d) intense concentration; (e) effortless action; (f) an unawareness of time; (g) enjoyment – doing an activity because it feels enjoyable rather than for an expected reward; and (h) a sense of control. Another conceptualization of flow (Bakker, 2005) includes three dimensions: total immersion in an activity, intrinsic motivation, and enjoyment. For this study, we follow Csíkszentmihályi's (1975) conceptualization of flow as described by the preconditions below.

Balance between challenges and skills

According to Csíkszentmihályi (1975, 1978, 1990), the balance between an individual's perceived challenge of a task and the individual's skills is a precondition for experiencing a state of flow. For each person, their unique equilibrium between challenges and skills will determine their state of flow. Initially, Csíkszentmihályi (1990) proposed that a state of flow was achieved by matching high skills with high challenge activities. However, research has come to show that above average, moderate challenges matched with above-average skills are optimal for generating flow (Haworth & Evans, 1995; Chen, Wigand, & Nilan, 1999).

Clearly outlined goals

Csíkszentmihályi's (1975) second dimension emphasizes the importance of clarity when defining goals. In addition to pairing challenges and skills, having clear goals enables individuals to act with purpose. Having clear goals eliminates the ambiguity of the task, providing individuals with structure and more efficiently to generate a state of flow while engaging in an activity (Csíkszentmihályi, 1997). The Performance Peak Center (2018) states that clear goals give you something to aim for, increasing focus and a sense of control in your future.

Immediate feedback

Csíkszentmihályi's (1975) third dimension for generating flow is immediate feedback. Immediate feedback enables an individual to better understand the task or activity without worrying if they are progressing accordingly or not. Since the feedback is quick, it is less likely not to disturb an individual immersed in a task. It is a necessary condition for achieving a state of flow as an individual is aware of their performance (Csíkszentmihályi, 1975; Quinn, 2005).

Intense concentration, effortless action, unawareness of time, and engagement

Concentration is perhaps the core element for achieving a state of flow. Researchers agree that a hyper-focused level of cognitive absorption in a task or activity is fundamental for attaining flow (Csíkszentmihályi, 1990; Bakker, 2008). In a flow state, a high level of concentration is achieved; irrelevant stimuli are more easily tuned out, leading to effortless engagement and an unawareness of time while involved in the task. While in flow there is no room for distractions from the concentrated activity – Csíkszentmihályi (1975) explains that while in a state of flow the mind becomes clearer and so immersed in the activity that what may be hours passing by feels more like minutes. A feeling of bliss and increased enjoyment is experienced while in this state. Enjoyment is considered a key element in the experience of flow because all of the features that make up flow are as such, enjoyable (Bakker, 2008' Csíkszentmihályi, 1990).

Sense of Control

According to Nakamura and Csíkszentmihályi (2002), a flow state is generated as an individual develops a sense of control over the activity at hand. In the workplace, this includes employees perceiving the degree of autonomy in their work. Researchers have found that a sense of control has many benefits including increased joy, alertness, decreased mortality, decreased depression and anxiety, and a greater sense of wellbeing (Keeton, Perry-Jenkins, & Sayer, 2010). A sense of control is likely to foster a state of flow as an individual is less likely to feel anxiety or worry.

According to Csíkszentmihályi, most people have experienced a state of flow. Flow is a universal state, irrespective of cultures, educational levels, or profession. In his research, Csíkszentmihályi identified the following recurrent moods, which people experience as they

engage in activities varying in degrees of combined challenge and skills. As previously noted, the balance between an individual's perceived difficulty of a task and the individual's abilities is a precondition for entering a state of flow (Csíkszentmihályi, 1975, 1978, 1990). Figure 1 below illustrates this dynamic combination

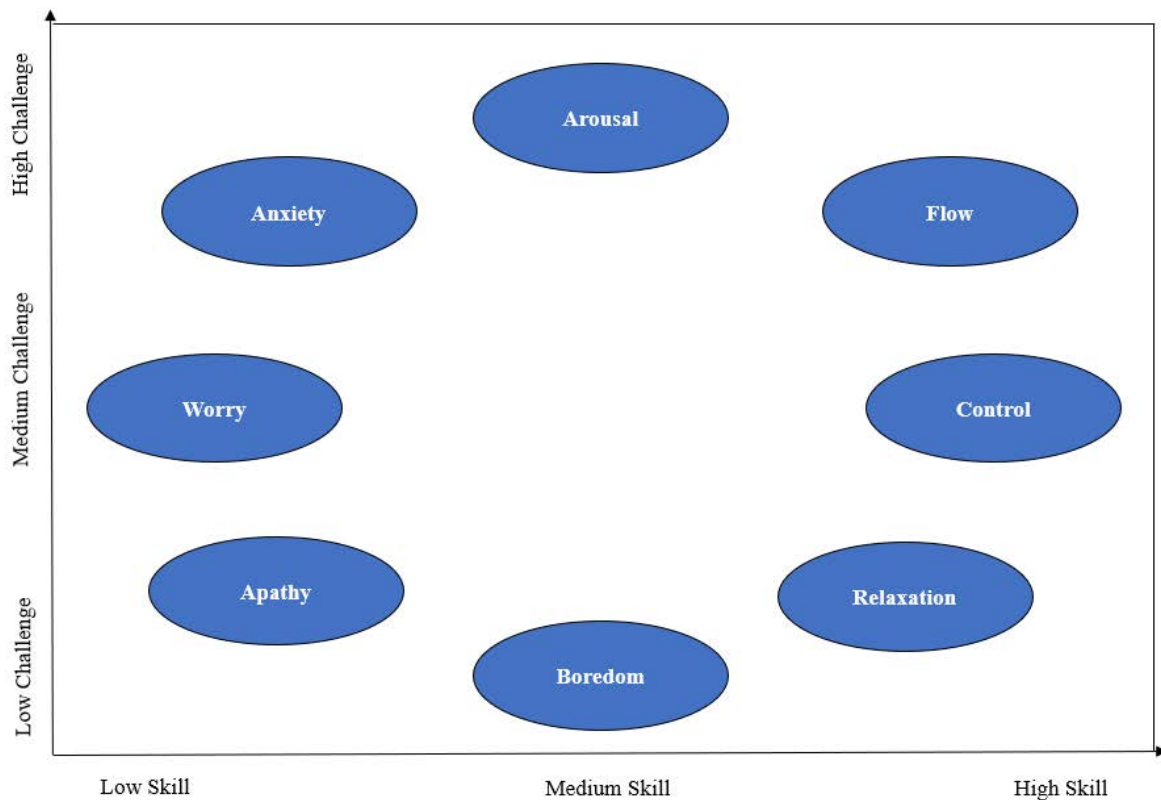


Figure 1. Depiction of Csikszentmihalyi's Flow State Model (Marer, et al., 2015)

Flow and Engagement

The term "flow" has been directly compared to the notion of engagement – both constructs have foundations about the extent to which people absorb themselves to a task or activity (Kahn, 1990; Jackson & Eklund, 2002; Kahn & Fellows, 2013). Due to the nature of similarity between these two constructs, the literature includes both viewpoints: (1) that flow causes engagement; and (2) that engagement results in increased flow (Rupayana, 2008).

However, research has also cited flow as a predictor of engagement (Jin et al., 2017). A fundamental precondition in generating a state of flow is achieving a balance between skills and challenges (Csíkszentmihályi, 1975). Research has found that when engaged employees no longer see their jobs challenging, they change jobs – indicating a balance between skills and challenges for engagement (Schaufeli, & Bakker, 2004). Absorption, an element conducive to flow, also overlaps in the engagement literature; studies applying flow and engagement as interchangeable have found similar results between the two constructs (Schaufeli & Salanova, 2007; Bakker, 2005; Demerouti, 2006). Although very similar, there are differences between the two constructs. For example, flow is a temporary state, while engagement is usually an extended state; individuals can periodically enter in and out of a flow state (Marer et al., 2015). Flow is a peak state that occurs while involved in a specific activity, whereas engagement is more pervasive and occurs primarily in the workplace and at home (Schaufeli & Salanova, 2005). Furthermore, flow can provide a sense of control over an individual's task, whereas the literature on engagement does not discuss this element (Rupayana, 2008).

Flow at work

The study of flow at work has been related to positive outcomes such as job performance and task performance (see Bakker 2008; Demerouti, 2006; Hofslett & Vivoll, 2009). Flow theory continues to offer a framework for workplace research, contributing to organizational implications of how leaders can engage followers (Linsner, 2009). According to Csíkszentmihályi (2003), the best thing managers and leaders can do for employees is generate a flow workplace – an environment where employees enjoy their work and grow in the process. As profound shifts occur in organizational strategy – shifting from traditional "command and control" to that with a focus on people, Csíkszentmihályi's flow theory can provide organizations with the balanced outcomes of profit and purpose. Furthermore, researchers found that flow occurs in the workplace more often than in other environments; work-related tasks more frequently offer the conditions for generating flow including challenging situations, concentration, and clear goals (Csíkszentmihályi & LeFevre, 1989).

The literature cites numerous ways to measure flow including semi-structured interviews (Csikszentmihalyi, 1975), experienced sample modeling (Csikszentmihalyi & Larson, 1987), observations (Egbert, 2003), challenge-skill ratio (Pearce, Ainley, & Howard, 2004) and self-report questionnaires (Bakker, 2005). However, a gap remains in the literature as it relates to studying the relationship between leadership skills, promoting flow and generating profit through gamification

Leadership Development

Leadership is a frequently researched topic as it is vital to the success of an organization. In the 19th century, Carlyle's (1888) great man theory assumed that leaders were born possessing abilities that enabled them to lead and that great leaders could arise when the need for them was

great. At the beginning of the 20th century, traits theory superseded the great man theory and assumed that leadership traits were not innate but could be developed (Kreitner & Kinicki, 2008). In the mid-20th century, Stogdill (1948) contested traits theory, suggesting there is no difference in traits between leaders and non-leaders. Behavioral styles theory became popular during the second world war as part of developing better military leaders – behavioral theorists believed that behavior was the best predictor of influence and leadership results and that leaders were made, not born (Kreitner & Kinicki, 2008). Ensuing research identified additional dimensions for leadership, including situational context, follower readiness, and relationship building (Lopes, Fialho, Cunha & Niveiros, 2013).

Organizations have long-acknowledged that leadership capabilities can, and should be developed; as such, leadership development positions organizations for success. According to bussinessdictionary.com (2018), leadership development is defined as the teaching of leadership qualities to an individual who may or may not use the learned skills in a leadership position. However, leadership development is not management development; although dimensions of leadership development and management development overlap, the former is distinct to the extent that it prepares individuals for roles and situations beyond their current experience (Bolden, 2005). Previous research has shown leadership is positively associated with profits, team success, and improvements in customer satisfaction (Lieberson & O'Connor, 1972; Smither & Waldman, 2008); however, research is lacking in demonstrating the leadership skills associated with promoting flow and generating profit. According to Bersin & Associates (2011), leadership development is one of the most significant investment areas in human resources and talent management. As demonstrated by many companies, investing in leadership development is imperative for organizations, even in times of crisis when the economy is struggling – some

companies continue to invest in leadership development to avoid lacking influential leaders once the economy recovers (Kreitner & Kinicki, 2008).

Leadership Development for Millennials

Today's organizations offer a variety of leadership development programs for employees including coaching and mentoring, online videos and assessments, project and rotational assignments, instructor-led workshops, and computer-based simulations to name a few (Bersin, 2011). Millennials, the workforce's digital natives, are often referred to as synonymous with technology (Hagemann and Stroope, 2013). This generation has a vast experience living, learning, and developing in virtual contexts – the use of technology is often used as a dimension for improving the learning experience for millennials (Hoffman & Vorhies, 2017). Just like educators must reexamine their teaching approaches to reach learners, so do facilitators of leadership development in organizations. In their 2013 study, Lykins and Pace found that 56 percent of companies believe that millennials require specialized leadership development programs and that only 15 percent of these companies offered specialized programs for their millennial employees. Lykins and Pace (2013) also found that high performing organizations were 57% more likely to offer customized leadership development programs for millennials. One way to personalize leadership development for millennials in the workplace is through gamification (Lopes et al., 2013).

Gamification

The use of computer-based, simulations, or gamification, has been utilized by management educators as a learning approach for developing students as well as employees. For the context of this study, the terms “simulation” and “gamification” are used interchangeably as they are often treated as such in business games literature (Lopes et al., 2013). These modes of

learning can offer learners replications of scenarios typically found in an organizational context (Salas, Wildman, & Piccolo, 2009; Ana & Aznar, 2017). According to Training Industry (2013), these virtual simulations have become more common and desirable leadership development tools.

Often, gamification can be useful learning tools for organizations as they are motivational and engaging, requiring participants to build and reconstruct knowledge actively – leadership simulations are no longer a fad or specific to cutting-edge organizations (Brand & Elbaz, 2016; Catalan & Martinez, 2018). Simulations are often used as tools in education and training for the development of skills and wellbeing in a variety of sectors. Ana and Aznar (2017) found that students are motivated and have higher concentration during simulated activities; students in the study perceived simulations as useful tools for acquiring skills for decision making, problem-solving and analyzing business information. Furthermore, researchers have found that participants and workplace managers positively view business simulations as practical teaching tools for management development (Cannon & Burns, 1999; Catalan & Martinez, 2018). Reeves et al. (2008) have also found strong relationships between virtual game environments and professional activities.

In their review of the literature, Güss, Edelstein, Badibanga & Bartow (2017) mention an increase in popularity for research using simulated problems in micro-world simulations; these games are dynamic, complex, and non-transparent, increasing the challenges of the simulation. Tao, Yeh & Hung (2015) characterize simulations as being participative, interactive, inductive, exploratory, and reflective. The Association to Advance Collegiate Schools of Business (AACSB) (2007, pp 29-43) requires a business simulation to have the following characteristics:

1. "It must consider ethical aspects and implications: participants must be able to recognize and analyze different ethical problems presented either directly or indirectly.
2. It must provide mechanisms for the communication of all aspects used during the business game.
3. It must facilitate critical analysis: participants must be able to study the conditions of the competitive environment and make decisions using theoretical models and know the tools that enable the choice of appropriate choices.
4. It must promote group work: it must encourage participants to establish systems of collaboration to achieve the group's objectives.
5. It must provide a global perspective that enables the participants to recognize opportunities and the risks associated with the concurrence of different cultures, market structures, currencies, and matters location-sensitive."

Leadership simulation: FLIGBY – the Official Flow-Leadership Game

There are numerous business simulation games available for developing learners in organizations. One business simulation is FLIGBY, a global-award-winning game aimed at generating a flow workplace as well as providing participants with a wide range of leadership challenges (Marer, Buzady & Vecsey, 2015). FLIGBY is the acronym for "Flow Is Good Business for You." According to the simulation's creators, "Good Business" is about finding a balance between meeting the needs of all stakeholders – this can include outcomes often desired by shareholders such as profits and results-focused on the satisfaction of the organization's employees.

The simulation was created as a management and leadership development tool for organizations. FLIGBY's participants assume the role of general manager for a California

winery. Throughout the simulation, players make over 150 decisions that apply flow-based practices as embodied by Csikszentmihalyi's (1975) concept of flow. One of the critical goals of the game is to promote a flow-state amongst as many employees as possible. Feedback is often provided throughout the game, an aspect that should be beneficial to millennials as this generation is accustomed to regular feedback (Farrell & Hurt, 2014). Upon completing FLIGBY, participants receive a report measuring their performance across 29 leadership skills.

FLIGBY is a comprehensive and interactive leadership simulation that is aimed at developing better leaders. Through FLIGBY's gamification of flow, players identify their leadership potential by simulating management and leadership behavior. This simulation is comprised of psychometric tests that measure and develop flow-promoting leadership skills that are assessed as players strive to achieve balance through four key objectives: (1) improving profitability; (2) creating and maintaining a flow-friendly work environment; (3) promoting flow among employees as captured by the flow trophies won throughout the game; and (4) the total sum flow index at the completion of the game. The simulation has been played by MBA students globally as leadership development to fulfill the course curriculum (Marere et al., 2015). More recently, Wilson (2019) researched the relationships between user background, media library, and gameplay interactions in FLIGBY to fulfill a thesis at Central European University. Wilson's (2019) research found hours played and media items viewed to be significantly related to generating both flow and profit. It is important to differentiate this study from Wilson's (2019) research as the current study focuses on a specific set of FLIGBY's leadership skills and the relationships with promoting flow and generating profit, among millennials managers.

Chapter Summary

This literature review provided a review of millennials, flow, and leadership development - emphasizing gamification through the simulation, FLIGBY. Millennials are an ideal population for this quantitative study. The generation continues to occupy an increasing number of leadership roles, yet more than 60 percent reported they don't believe their leadership skills are being fully developed (Deloitte's Millennial Survey, 2016). This quantitative study brings together several ideas that are challenging today's organizations. The importance of social enterprises is recognized by many CEOs, educational and community leaders with a majority of CEOs rating the impact on society as the most important measure of success in 2019 (Volini et al., 2019).

This study will help determine the effect of leadership skills in promoting flow and generating profit (by millennial managers). As a talent management practitioner, I understand the needs analysis that an organization must first undertake before investing and implementing a leadership development initiative. I believe the findings of this study can offer practitioners in human resources, organizational development, and talent management a starting point. I speculate that an increasing number of organizations will continue to shift to a social enterprise model, and as such, they will be required to develop their leaders with the appropriate leadership skills to balance success with both profit and people. Promoting flow in the workplace can be a winning approach to meeting the needs of the people. FLIGBY is an ideal instrument as it simulates, generating both flow and profit.

Chapter III: Research Methods

Introduction

This chapter presents the research process, including the research instrument, population sampling, data analysis, validation, and hypotheses. The primary purpose of this study was to gain an understanding of the effect of leadership skills related to promoting flow and generating profit. The expected result is that FLIGBY's leadership skills including *balancing skills, feedback, applying personal strengths and strategic thinking* will be related to flow and that FLIGBY's leadership skills including *analytical skill, information gathering, organizing, and delegating* will be related to generating profit (Marer et al., 2015). The study led to a greater understanding of the relationships between leadership skills and promoting flow and generating profit. The study contributed to the scarce literature investigating these variables through gamification.

To effectively measure the relationships between leadership skills, promoting flow, and generating profit through, a quantitative method was employed analyzing gameplay data from FLIGBY. As stated by Creswell (2003), quantitative research applies statistical data to predict, explain, and confirm phenomena. Indeed, the applications of quantitative analysis were a key objective of this study – to establish and describe the relationships between leadership skills, promoting flow, and generating profit. Furthermore, the general approach of this study naturally aligned with a quantitative research methodology. More specifically, quantitative research often begins with a problem statement, followed by a hypothesis, and data analysis subject to statistical interpretation (Creswell, 2003).

The study consisted of analyzing secondary data as the approach for data analysis. Secondary data includes data which already exists – the analysis of secondary data is typically

for verifying previous studies or for investigating new questions with the data (Glaser, 1963). Consequently, I was not involved in the recruitment of participants or the data collection for this study. The secondary data was provided by the producers of FLGBY, the award-winning leadership development game (FLIGBY Awards, 2019). More than 5,000 individuals across the globe, including business leaders, employees, and MBA students have played FLIGBY contributing to its growing data set. A huge benefit to using secondary data from FLIGBY's database was the access to a large sample size of millennial managers that played the simulation. Conducting secondary research is ideal for accessing difficult to reach samples while minimizing the financial time constraints of gaining access to participants (Trochim, 2006). The secondary data analysis in this study was ideal for testing the hypotheses and research questions.

Institutional Approval

The Institutional Review Board (IRB) at the University of North Florida (UNF) approved to conduct this study on August 26, 2019. After review of the research study, the IRB at UNF declared the study as "not research involving human subjects" based on the definitions provided in the U.S. Department of Health and Human Services Code of Federal Regulations found at 45 CFR 46.102. As such, this research study was issued a waiver.

Methodological Overview

As previously stated, this study employed a quantitative method to understand the effect of leadership skills on promoting flow and generating profit. The target population was millennials that are people managers, aged 18 and above. The scientific method for this study was deductive, testing hypotheses with data (Jebb, Parrigon & Woo, 2016).

Setting

As previously mentioned, this study utilized secondary data consisting of participants that played the leadership simulation, FLIGBY. The participants were located globally, across 49 countries. Participants from the 49 countries were utilized based on their availability on the secondary data.

Participants

The present study includes a sample size of 1,184 participants (697 males, 487 females; age range, 23-38 years) across 49 countries of which a majority were from Hungary, the United States, Turkey, and Kazakhstan. Given the large sample size from the secondary data, a power test was not conducted to determine sample size. The significantly larger sample size in this study increased the external validity of the research as the data more closely mirrors the substantially higher population (Quantitative Research Methods, 2019). Furthermore, this study targeted a population of millennial managers—their roles included frontline managers, senior managers, and executives.

Instrument

The current study will employ FLIGBY – the Official Flow-Leadership Game as the instrument to measure the respective constructs. More specifically, this quantitative study will examine secondary research data from a global population of millennial managers that played FLIGBY. FLIGBY (2018) is a leadership simulation developed by Csíkszentmihályi and ALEAS Simulations. The acronym, FLIGBY, refers to "flow is good business." This simulation is the "gamification" of flow-based leadership (Marer, Buzady & Vecsey, 2015). FLIGBY provides participants with an interactive, simulated experience, where each player assumes the role of general manager for a wine company. At the start of the game, players are

appointed as the new general manager for a fictional Californian winery. As the general manager, each player makes over 150 decisions from which fundamental underpinnings of Csíkszentmihályi's (1975) flow theory are embodied; as such, the decisions made by the general manager may or may not lead to promoting flow among employees and generating profit. The game functions to prompt players with workplace dilemmas at the winery, for which players try to make decisions congruent with Csíkszentmihályi's (1975) flow theory. In most decisions, players have two to five options for how they can respond. One key objective of the game is to bring the winery's employees into a state of flow (promoting flow) as often as possible, even if temporarily. A second key objective is profit potential, referred to in this study as generating profit. To achieve a balance between profit and the needs of employees, players will have to judge when to support their team and when to practice "tough love" in the interest of factors such as the business, shareholders, employees and the local community environmentalists (Marer et al., 2015).

FLIGBY is comprised of 23 scenes, each with its own little story and problem to solve. The simulation takes players an average of seven hours to complete – players typically play the simulation throughout various intervals, making progress incrementally. Throughout the game, players can monitor their performance and progress. Each time, an employee enters a state of flow, the general manager earns a "Flow Trophy." At the end of the game, your trophy inventory determines the extent to which you promoted flow among your employees. There is a maximum number of 21 trophies to be earned, for which the scorecard is indicated by the total percentage of trophies earned over the total number of trophies that could be obtained (21). As with all the independent and dependent variables in this study, the scoring for promoting flow ranges from

zero to 100 percent. In the role of a general manager, it is the player's responsibility to promote flow among employees and to also meet business objectives, including generating profit.

More broadly, FLIGBY assesses each player across 29 leadership skills. After completing the simulation, players receive a leadership profile with scores from zero to 100 percent as a measurement of their performance across the 29 leadership skills (see Table 1). The leadership skills were determined based on interviews between Csikszentmihalyi (2003) and his many interviews with business executives, along with cooperation with FLIGBY's producers (Marer et al., 2015). Additionally, FLIGBY's producers mapped the 29 leadership skills into categories that align with the Executive-Core-Qualifications (ECQ), a widely used leadership frameworks (see www.opm.gov, 2018). (see Table 2). As previously stated, the scores for each leadership skill range from zero to 100 percent. An automated, pre-programmed algorithm embedded in FLIGBY records each player's decision making throughout the game, generating a leadership skills profile upon completion (Marer et al., 2015).

Obtaining access to FLIGBY was arranged during the Spring 2018 semester when I reached out to FLIGBY's co-founder, Zad Vecsey, and informed him about my interest in the simulation. Vecsey and his team, graciously, provided me with access to play FLIGBY so that I could gain familiarity with the simulation. This first step was foundational for me to understand FLIGBY's intricacies, and it was helpful as I began to develop a research design. After several Skype conference calls, Vecsey and his team agreed to contribute to the research study by providing me with a secondary data set of players who completed FLIGBY. This was a monumental step towards increasing external validity for this study because the secondary data set provided me with a far larger sample size for research.

Table 1

FIGBY's 29 Leadership Skills

Skill	Definitions as presented by FLIGBY
"Active Listening	Active listening is a way of responding to another person that improves mutual understanding.
Analytical Skill	Analytical skill is the readiness to visualize, articulate, and solve complex problems and concepts and make decisions that are sensible based on the available information.
Assertiveness	Assertiveness is the readiness to express your emotions and needs without violating the rights of others and without being aggressive.
Balancing Skill	Balancing skill is the readiness to maintain the same importance between things, considering them in the same way.
Building Engagement	Building engagement is the readiness to create trust and a positive, fulfilling, work-related state of mind that is characterized by dedication.
Business-Oriented Thinking	Business-oriented thinking is the readiness to manage situations and solve problems to create added value to the company and in the end, create value for the shareholders/stakeholders.

Table 1 (Continued)

Communication	Communication skills are the set of skills that enables a person to convey information so that it is received and understood.
Conflict-Management	Conflict-management is the practice of identifying and handling conflicts in a sensible, fair, and efficient manner.
Delegation	Delegation is the readiness to confer functions or powers on another person, so he or she can act on behalf of the manager.
Diplomacy	Diplomacy is the readiness to take into account the varying interests and values of the other parties involved in the negotiation, treating those differences with respect, and dealing with people tactfully.
Emotional Intelligence	Emotional intelligence is the capacity and readiness to understand, express, and regulate emotions in oneself and others.
Empowerment	Empowerment is a skill of sharing information, rewards, and power with employees so that they can take the initiative and make decisions to solve problems and improve service and performance.

Table 1 (Continued)

Entrepreneurship (Risk-Taking)	Entrepreneurship is a capacity and willingness to undertake the conception, organization, and management of a productive venture with all attendant risks while seeking profit as a reward.
Execution	Execution is the act of performing, the completion of managerial tasks, and the readiness of doing something successfully.
Feedback	Feedback to employees is information regarding their performance; for which they can also take action.
Future Orientation	Future orientation is the readiness to think in long terms. This is the skill of "forward-looking."
Information Gathering	Information gathering is the readiness to collect adequate information to perform the next step based on this information.
Intuitive Thinking	Intuitive thinking is a way of thinking that does not use rational processes such as facts and data.
Involvement	Involvement is the readiness to participate in the activities of formal or informal teams/groups, all the way to the execution process.
Motivation	Motivational skills are those that enable a person to become motivated and work toward achieving goals.

Table 1 (Continued)

Organizing	Organizing is the readiness to initiate, arrange, and manage several elements into a purposeful structure.
Personal Strengths	Recognizing and applying personal strengths is the readiness to discover and to put to good use those individual strengths of others that are not immediately obvious.
Prioritizing	Prioritization is the readiness to evaluate a group of items and ranking them in their order of importance or urgency.
Social Dynamics	An awareness of the complexity of many situations and the social dynamics that govern them.
Stakeholder Management	Stakeholder management is the ability to manage the business process, often involving a trade-off, to have a positive impact on the organizations' stakeholders, including that of society at large.
Strategic Thinking	Strategic thinking helps managers to set goals, to determine priorities, to review policy issues, and to perform long term planning.
Teamwork Management	Teamwork management is the readiness to form, facilitate, and monitor teamwork and teams.
Time Management	Time management is a readiness of systematic, priority-based structuring of time allocation and distribution among competing demands.

Table 1 (Continued)

Time Pressured Decision-Making	Decision-making under time pressure is a readiness that enables effective decision-making when limited time and inadequate information is available” (FIGBY Leadership Skillset, 2018, pp, 34-37).
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Table 2*FLIGBY Leadership Skills Mapped to Executive Core Qualifications*

System	Corresponding Skill and Category				
ECQ Categories	Leading Change	Leading People	Results Driven	Business Acumen	Building Coalitions
FLIGBY Leadership Skills	Future Orientation	Emotional intelligence	Business-oriented thinking	Analytical skill	Assertiveness Communication
	Intuitive Thinking	Feedback	Execution	Information gathering	Building engagement
	Strategic Thinking	Motivation	Entrepreneurship	Organizing	Diplomacy
	Involvement	Personal strengths	Prioritizing	Delegation	Conflict management
	Empowerment	Balancing skill	Timely decision making		
	Stakeholder Management	Teamwork	Time management		Social dynamics
		Active Listening			

Validation: FLIGBY – the Official Flow-Leadership Game

FLIGBY is a leadership development tool for generating flow in the workplace. The development of this practical, interactive leadership simulation included the involvement of flow theory's founder, Mihaly Csikszentmihalyi, to effectively implement the concept of flow into the elements of the simulation (Buzady, 2017). FLIGBY's credibility as a leadership development tool corresponds to the games' real-life, interactive, scenario-based approach. It has been utilized for leadership training by organizations banks and in MBA courses as a leadership teaching mechanism. In 2018, FLIGBY earned the Global Champion in Pedagogy Innovation Award, and in 2012 FLIGBY won the International Serious Play Gold Medal Award (FLIGBY Awards, 2019). In his thesis, Wilson (2019) found that FLIGBY is well-balanced and does not bias against gender, age, or nationality. An added benefit of this study includes its contribution to the literature of flow and gamification using FLIGBY as an instrument.

Procedure

The secondary data was provided to me by FLIGBY's creators. Data was delivered in a spreadsheet format within an Excel file. The data secondary data set was ready for use—as the principal researcher, I segmented the data to only include millennials born between 1981 and 1996 (Fry, 2018). Further segmentation of the population included only including millennials that were indicated as being managers of people (including frontline managers, senior managers, and executives). Participant names were not provided to me as part of the data set; instead, a unique ID number was utilized to correspond to each individuals' results.

Research Questions and Hypotheses

For this study, the research will focus on eight out of FLIGBY's 29 leadership skills. As it relates to flow, this study aims to measure the effect of leadership skills on promoting flow. In

cooperation with Csikszentmihalyi and interviews with business leaders, FLIGBY's creators proposed four leadership skills most related to flow: balancing skills; feedback; applying personal strengths and strategic thinking (Marer et al., 2015). It is therefore hypothesized that FLIGBY's leadership skills, including *balancing skills, feedback, applying personal strengths, and strategic thinking*, will be positively associated with promoting flow.

As it relates to profit, this study aims to measure the effect of leadership skills on generating profit. Marer et al. (2015) have mapped FLIGBY's leadership skills to align with the five categories of the Executive Core Qualifications (ECQ): leading change; leading people; results-driven; business acumen; and building coalitions (Marer et al. 2015, & omp.gov, 2019). The business acumen ECQ was identified as most inclusive of the qualifications that may be related to generating profit. The United States Office of Personnel Management (OPM) (2019) defines the business acumen ECQ as those core qualifications that involve managing human, financial, and information resources strategically. Marer et al. (2015) mapped the following FLIGBY leadership skills to the business acumen ECQ: *analytical skill; information gathering; organizing; and delegating*. On related logic, it is hypothesized that FLIGBY's leadership skills, including *analytical skill, information gathering, organizing, and delegating*, will be positively associated with generating profit.

In sum, this study aims to test the following research questions and hypotheses, by focusing on millennial managers as the target population of study:

With a focus on millennial managers as the target population, the current study's hypotheses are based on the cooperation between Marer et al. along with Csikszentmihalyi and his interview with business leaders. The research questions, the null hypothesis (H_0) and the alternative hypothesis (H_a) for this study are as follows:

(Research Question 1): What is the effect of leadership skills on promoting flow amongst employees in FLIGBY?

- *H_{a1a}*: Balancing skills has a statistically significant positive relationship with promoting flow amongst employees.
- *H_{a1b}*: Feedback has a statistically significant positive relationship with promoting flow amongst employees.
- *H_{a1c}*: Applying personal strengths has a statistically significant positive relationship with promoting flow amongst employees.
- *H_{a1d}*: Strategic thinking has a statistically significant positive relationship with promoting flow amongst employees.

(Research Question 2): What is the effect of leadership skills on generating profit FLIGBY?

- *H_{a2a}*: Analytical skill has a statistically significant positive relationship with generating profit.
- *H_{a2b}*: Information gathering has a statistically significant positive relationship with generating profit.
- *H_{a2c}*: Organizing has a statistically significant positive relationship with generating profit.
- *H_{a2d}*: Delegating has a statistically significant positive relationship with generating profit.

Data Analysis

Once the data was segmented to a manner applicable for this study, it was imported into SPSS for analysis. The data file consisted of nominal and continuous data; however, it was the continuous data for which correlational analysis was conducted to answer the research questions

and confirm the hypotheses. Correlation analysis is a bivariate statistical method used to determine the relationship between two variables, as well as the direction and degree of the relationship (Creswell, 2014). Additionally, exploratory factor analysis (EFA) was conducted to explore if potential intercorrelations exist between the variables. EFA is often used to reduce many variables to as few as possible—ultimately, factor analysis gives the researcher a clearer view of the data while setting the stage for succeeding analysis (Darlington, 2004).

Summary

The proposed methodology in this study is fitting for analyzing secondary data. First, the study will examine the relationship between four leadership skills (balancing skill, feedback, applying personal strengths, strategic thinking) and promoting flow. Second, the study will examine the effect of leadership skills (analytical skill, information gathering, organizing, delegating) and generating profit. Third, exploratory factor analysis will be conducted to understand the intercorrelations between the variables better, offering potential factor reduction and subsequent regression analysis. Chapter 4 provides the results and analysis of this quantitative study.

Chapter IV: Results

Introduction

This chapter contains the results of this quantitative study as laid out in Chapter 3. The purpose of this quantitative study was to test the effect of leadership skills related to promoting flow and generating profit. The study utilized a secondary data set collected from millennials managers that played a leadership simulation called FLIGBY. The chapter begins with a discussion of the participants and proceeds to discuss each hypothesis and research question.

Participant Demographics

As previously mentioned, this study analyzed a secondary data set; thus, there was no recruitment of participants. Table 3 illustrates the demographic breakdown of participants in the study, including gender, age, management level, and management experience.

Table 3

Frequencies and percentages of demographics

Demographic	Mean	Median	S.D.	Characteristic	Count	Percentage
Gender				Male	697	59%
				Female	487	41%
Age	32	34	4.18	23-30	332	28%
				31-38	852	72%
Management Level				Frontline Manager	674	57%
				Senior Manager	244	21%
				Executive	266	22%
Management Experience				< 1 Year	202	17%
				1-3 Years	477	40%
				3-7 Years	374	32%
				7-15 Years	123	10%
				> 15 Years	8	1%

Method of Analysis

A correlational analysis was conducted to test the association between leadership skills and promoting flow. The correlation analysis aimed to: (1) confirm there is a relationship; (2) establish the direction of the relationship; (3) determine the strength of the relationship. I decided the statistical significance with an alpha of .05, ensuring a 95% confidence that any significant relationships did not occur by chance.

Assumptions

Several assumptions must be met when using Pearson correlation analyses. The first assumption is the level of measurement, which requires that each variable is continuous. For each of the hypotheses, the assumptions for the level of measurement were consistent with the requirements. The second assumption is related pairs, which requires that each observation should have a pair of values. The third assumption is the bivariate normal distribution, which includes excluding any outliers from the two sets of variables that skew either data in one direction or another. The fourth assumption is linearity, which assumes a straight-line relationship between the variables. Should the data fail to meet the assumptions, I applied the Spearman correlation, an alternative nonparametric test to the Pearson correlation.

Research Question 1

What is the effect of leadership skills (balancing skill, feedback, applying personal strengths, strategic thinking) on promoting flow amongst employees in FLIGBY?

The following hypotheses were tested as a part of answering research question 1:

- H_{a1a} : Balancing skills has a statistically significant positive relationship with promoting flow amongst employees.

- H_{a1b} : Feedback has a statistically significant positive relationship with promoting flow amongst employees.
- H_{a1c} : Applying personal strengths has a statistically significant positive relationship with promoting flow amongst employees.
- H_{a1d} : Strategic thinking has a statistically significant positive relationship with promoting flow amongst employees.

Table 4 presents the correlations for the hypotheses in research question 1. As displayed in Table 4, each of the leadership skills had a statistically significant positive relationship with promoting flow amongst employees in FLIGBY. Additionally, boxplots including outliers, excluding outliers, and scatter plots were graphed, displaying steps taken to meet the assumptions of correlation (see Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F, Appendix G, Appendix H, Appendix I, Appendix J, Appendix K, Appendix L, Appendix M, Appendix N, Appendix O, Appendix P, and Appendix Q).

Table 4

Spearman's Rho Correlations Between Leadership Skills and Promoting Flow

	Promoting Flow	Mean	SD
1. Balancing Skill	.20**	64.97	10.39
2. Feedback	.22**	69.89	10.18
3. Applying Personal Strengths	.18**	68.32	9.32
4. Strategic Thinking	.15**	63.03	10.98

** Correlation is significant at the 0.01 level (1-tailed).

Research Question 2

What is the effect of leadership skills on generating profit in FLIGBY?

The following was the first hypothesis tested as a part of answering research question 2:

- H_{a2a} : Analytical skill has a statistically significant positive relationship with generating profit.
- H_{a2b} : Information gathering has a statistically significant positive relationship with generating profit.
- H_{a2c} : Organizing has a statistically significant positive relationship with generating profit.
- H_{a2d} : Delegating has a statistically significant positive relationship with generating profit.

Table 5 presents the correlations for the hypotheses in research question 2. As displayed in Table 5, each of the leadership skills had a statistically significant positive relationship with generating profit in FLIGBY. Additionally, boxplots including outliers, excluding outliers, and scatter plots were graphed, displaying steps taken to meet the assumptions of correlation (see Appendix R, Appendix S, Appendix T, Appendix U, Appendix V, Appendix W, Appendix X, Appendix Y, Appendix Z, Appendix AA, Appendix BB, Appendix CC, Appendix DD, Appendix EE, Appendix FF, Appendix GG, and Appendix HH).

Table 5

Spearman's Rho Correlations Between Leadership Skills and Generating Profit

	Generating Profit	Mean	SD
1. Analytical Skill	.25**	65.64	9.09
2. Information Gathering	.33**	73.86	9.62
3. Organizing	.37**	67.59	10.58
4. Delegating	.24**	61.48	14.58

** Correlation is significant at the 0.01 level (1-tailed).

Exploratory Factor Analysis

To further understand the inter-correlations between the eight leadership skills, exploratory factor analysis was conducted. EFA offered a clearer view of the data. Moreover, the EFA reduced the eight leadership skills to one unitary factor. Table 6 presents descriptive statistics for the factor analysis, Table 7 presents the total variance explained in the EFA, and Table 9 includes the component matrix of the eight leadership skills.

Table 6*Descriptive Statistics of EFA*

Leadership Skill	Mean	SD	N
Analytical Skill	64.86	11.64	1,184
Balancing Skill	63.99	11.3	1,184
Delegating	60.18	15.55	1,184
Feedback	68.8	11.59	1,184
Information Gathering	71.97	11.09	1,184
Organizing	66.58	11.64	1,184
Applying Personal Strengths	68.06	10.55	1,184
Strategic Thinking	63.03	10.98	1,184

Table 7 presents the total variance explained among the factors as a result of the EFA. As indicated by the extraction of sums squared loadings, the eight leadership skills can be reduced to one new variable, underlying all eight leadership skills. This is evident in Table 7, where component 1 is presented as a new loading (variable) which accounts for 53.43% of the variance among the eight observed leadership skills.

Table 7*Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.274	53.431	53.431	4.274	53.431	53.431
2	1.095	13.683	67.114			
3	0.886	11.07	78.184			
4	0.514	6.428	84.612			
5	0.458	5.724	90.336			
6	0.331	4.135	94.472			
7	0.257	3.215	97.687			
8	0.185	2.313	100.00.			

Table 8 presents the component matrix from the EFA. This shows the loadings of the eight leadership skills into one new dimension. For this study, I named and referred to this new dimension (component 1), hereafter, as *social enterprise skill*. Evident in Table 7, each of the eight leadership skills had a high magnitude of factor loading into the social enterprise skill. Given that the EFA revealed 53.43% variance of the eight leadership skills under one new dimension (social enterprise skill), the hypotheses in research questions one and two no longer provide a compelling explanation of the relationships between the leadership skills, promoting flow and generating profit. As an alternative, the new dimension, social enterprise skill, serves as a compelling predictor of both promoting flow and generating profit—subsequent regression analysis was conducted.

Table 8

<i>Component Matrix</i>	
Leadership Skill	Social Enterprise Skill
Analytical Skill	0.71
Balancing Skill	0.83
Delegating	0.52
Feedback	0.78
Information Gathering	0.67
Organizing	0.77
Applying Personal Strengths	0.81
Strategic Thinking	0.72

Simple Linear Regression

A simple linear regression was conducted as a subsequent analysis of the EFA results to test if social enterprise skill (independent variable) significantly predicted promoting flow (dependent variable). The results of the regression indicate that the model explained 12% of the variance and that the model was significant, $F(1,1182)=164.11, p<.001$. It was found that social

enterprise skill significantly predicted promoting flow ($\beta_1 = 4.19, p < .001$). A second linear regression was conducted to test if social enterprise skill (independent variable) significantly predicted generating profit (dependent variable). The results of the regression indicate that the model explained 1% of the variance, yet the model was significant, $F(1, 1182) = 9.71, p < .01$. It was found that social enterprise skill significantly predicted promoting flow ($\beta_1 = .91, p < .01$). Table 9 shows the descriptive statistics.

Table 9

<i>Social Enterprise Skill and Promoting Flow Descriptive Statistics</i>			
Variable	Mean	SD	N
Promoting Flow	62.33	11.99	1,184
Generating Profit	70.26	10.13	1,184
Social Enterprise Skill	0.00	1.00	1,184

Chapter Summary

The study results confirmed the hypotheses first proposed at the beginning of the study. Further investigation with EFA revealed that eight leadership skills loaded into one factor that encompassed them all, accounting for 53.43% of the variance explained by these skills. A frequent and subsequent step after EFA is regression analysis. Given that the EFA reduced the eight factors into one new variable, named *social enterprise skill*, a simple linear regression was conducted, revealing the effect of the relationship between the independent and dependent variables. The results of the EFA offered clarity about the inter-correlations between the eight leadership skills, simplifying the predictive model to a singular dimension (social enterprise skill). These findings and are further discussed in chapter 5.

Chapter V: Discussion

The purpose of this quantitative study was to measure the effect of leadership skills (balancing skill, feedback, applying personal strengths, strategic thinking) and promoting flow and the effect of leadership skills (analytical skill, information gathering, organizing, delegating) and generating profit. This study examined secondary data from millennials managers that played FLIGBY, the flow leadership simulation. Additionally, this chapter includes discussion of the major findings and the implications that may be valuable for use by practitioners in corporations, educational institutions, or non-profit organizations. Lastly, this chapter concludes with a discussion of the limitations of the study, areas for future research, and a summary.

This chapter includes discussion and possible future research to help answer the following research questions:

(Research Question 1): What is the effect of leadership skills on promoting flow amongst employees in FLIGBY?

(Research Question 2): What is the effect of leadership skills on generating profit in FLIGBY?

It was no surprise that the eight leadership skills were significantly related to their respective dependent variable: (a) balancing skill, (b) feedback, (c) applying personal strengths, (d) strategic thinking, (e) analytical skill, (f) information gathering, (g) organizing, and (h) delegating. Ultimately, all eight leadership skills are highly correlated with each other and predict some level of variance when measured against the dependent variables.

Interpretation of the Findings

While balancing skill, feedback, applying personal strengths, and strategic thinking were leadership skills associated with promoting flow; they were strongly intercorrelated. Similarly, analytical skill, information gathering, organizing, and delegating were leadership skills associated with generating profit, and they were also strongly intercorrelated. Together, all eight variables intercorrelated with each other at a high magnitude, resulting in the factor loading of a new dimension, which was named social enterprise skill. The name of this new dimension, social enterprise skill, was fitting as the variable was a predictor of both promoting flow and generating profit. The results provided a contribution to the current literature on leadership skills, promoting flow, and generating profit in several ways.

Leadership Skills and Promoting Flow

First, the results supported Marer et al. (2015) that balancing skill, feedback, applying personal strengths, and strategic thinking was related to promoting flow. This research confirmed that notion, contributing evidence to the literature on leadership skills and promoting flow.

Importantly, the results coincide with several of Csíkszentmihályi's (2003) eight preconditions for entering a state of flow: (a) balance between challenges and skills; (b) clearly outlined goals; (c) immediate and clear feedback; (d) intense concentration; (e) effortless action; (f) an unawareness of time; (g) enjoyment – doing an activity because it feels enjoyable rather than for an expected reward; and (h) a sense of control.

Balancing skill underlies the preconditions, *balance between challenges and skills*. In FLIGBY, demonstrating the leadership skill *balancing skill* includes maintaining importance between the level of skill an employee has and the level of the challenge or task ahead of them. Millennial managers that scored high in demonstrating this leadership skill were in accordance

with Csíkszentmihályi's precondition of *balancing between challenges and skills*, ultimately promoting increased states flow for their employees. It makes sense that *feedback* underlies the precondition to flow, *immediate feedback*. In FLIGBY, demonstrating the leadership skill *feedback* includes providing employees with information regarding their performance.

Millennial managers that scored high in demonstrating this leadership skill were also in accordance with Csíkszentmihályi's precondition, *immediate and clear feedback*, leading to increased states of flow for their employees. For the leadership skill applying personal strengths, the precondition underlies, what seems as, several of Csíkszentmihályi's preconditions including *a balance between challenges and skills*, *intense concentration*, *effortless action*, and *doing an activity because it feels enjoyable rather than for an expected reward*. This is not surprising as the results indicated that *applying personal strengths* loaded high in the new factor, social enterprise, which encompasses all the variables. One can argue that when millennial managers recognize and put to good use those personal strengths of employees that are not immediately obvious them, the employees can achieve these four preconditions, leading to their increased flow. Lastly, *strategic thinking* underlies the precondition, *clearly outlined goals*. Millennial managers that score high in *strategic thinking* demonstrated setting goals as part of determining priorities and planning for their employees and business, coinciding with *clearly outlined goals*, ultimately leading to increased states of flow for employees. The results of this study align with Csíkszentmihályi's preconditions of entering a state of flow (2003).

Leadership Skills and Generating Profit

Second, the results supported mapping by Marer et al. (2015) of the leadership skills in FLIGBY (analytical skill, information gathering, organizing, delegating) to the Executive Core Qualification's *business acumen* category. The results confirmed significant relationships

between these four leadership skills and generating profit. This was not surprising as the business acumen category of the ECQ involves managing human, financial, and information resources strategically (opm.gov, 2019).

Millennial managers that scored high in *analytical skill* demonstrated complex problem solving and decision making based on available information while playing FLIGBY. It is rational that analytical skill underlies business acumen—this category from the ECQ includes thoughtful decision making and forecasting future outcomes. In FLIGBY, millennial managers that demonstrated thoughtfulness in forecasting future outcomes of their winery business generated higher profit. Similarly, *information gathering*, *organizing*, and *delegating* involve core practices described in ECQ's business acumen category (omp.gov, 2019). Millennial managers that collected adequate information (*information gathering*) structured multiple elements (*organizing*), and offered power or authority (*delegating*) to the qualified employees in FLIGBY, exercised their ability to manage finances, human capital and information to generate profit for the company. The results of this study align with the logic that the corresponding leadership skills to the ECQ's business acumen category, mapped by Marer et al. (2015), would be related to generating profit.

Exploratory Factor Analysis

The results of the EFA revealed high collinearity between the eight leadership skills in this study. What was most surprising about this finding was the reduction of all eight independent variables to one single variable. This does, however, align with the intention of EFA—to reduce many intercorrelated variables to less, yet more general underlying variables. In this study, the EFA reduced the eight independent variables to one. One of the overall goals of this study was to provide practitioners with a framework to develop leadership competency models that align

with an organization's social enterprise strategy. As such, I found it fitting to name the new variable, *social enterprise skill*. The subsequent analysis from the EFA results suggested that *social enterprise skill* (comprised of all eight leadership skills) is predictive of promoting flow and generating profit. These findings are indicative that the social enterprise may successfully focus on people and profit by adopting a competency model centered around: (a) balancing skill, (b) feedback, (c) applying personal strengths, (d) strategic thinking, (e) analytical skill, (f) information gathering, (g) organizing, and (h) delegating.

Implications for Theory and Research

The study of flow at work has been related to positive outcomes such as job and task performance, employee engagement, and wellbeing (see Bakker 2008; Demerouti, 2006; Hofslett & Vivoll, 2009; Jin, Liu, & Chen, 2017). Accordingly, Lisner (2009) positions that flow theory offers a framework for workplace research, and Csikszentmihályi (2003) upholds that the best things managers and leaders can do for employees is generate a flow workplace. While the results of this study confirmed the effect of eight leadership skills underlying *social enterprise skill* and promoting flow and generating profit, the study's significance is its contribution to the scant research about leadership skills, flow, and profit. Furthermore, this study contributes to filling a gap in the literature regarding the study of flow through gamification.

Implications for Practice

De Freitas and Routledge's (2013) review of the literature suggested that gamification studies can have implications for the design of leadership competency models through testing in a gaming environment. As a human resource professional, practicing in talent management, I have experiences designing leadership competency models. I believe this research may help other practitioners in their development of leadership competency models, particularly as it

relates to serving the growing number of social enterprises. It is important to note that these implications are applicable to organizations of all kinds, including corporations, educational institutions, and non-profits. Each of these types of organizations can function as a social enterprise, focusing on both its people and operational outcomes.

Given that millennials have challenged organizations to focus on profit and purpose as opposed to just profits, social enterprises should be expected to increase as this generation is projected to make up 75 percent of the workforce by 2030 (Fry, 2018; Williams, 2015). Furthermore, Generation Z is entering the workplace bringing with them a shared set of values including an increased desire for work-life harmony, a blend of high-touch and high-tech, an evolved approach to learning and development, and more frequent feedback (Jenkins, 2019). To stay competitive organizations will have to continue to focus on the needs of their employees while developing them to lead a successful social enterprise. This study provides a framework for practitioners of the potential leadership skills, to begin with when working with organizations to develop a leadership competency model for the aspiring social enterprise.

Limitations and Future Research

One limitation of the study was the focus on millennial managers as the target population. Certainly, there is rationale for leveraging the experiences and size of this cohort in the workforce as a basis to study them; however, the focus on millennials limits the generalizability to create a competency model for social enterprise leaders who belong to other generations. As such this study can be used a starting point to determine which skills can be effective at promoting flow and generating profit.

While I maintain that quantitative analysis was the appropriate method for this study, the use of secondary data meant that I did not have control over what is contained in the data. For

example, I was unable to administer additional assessments or surveys to capture data of interest from the participants. Another limitation of using secondary data was a lack of knowledge about how the data collection was carried out, resulting in potential inconsistencies in the experiences of the participants. Given the large data set of millennial managers from 49 countries that played FLIGBY, there is the risk of inconsistency in the instructional interaction between the administrators of FLIGBY and the participants. Additionally, the algorithm which measured performance against the leadership skills captured in FLIGBY was unknown to the researcher. This is an interesting limitation because of the high collinearity between the eight leadership skills of interest in the study. One can argue that FLIGBY's algorithm lacked the sensitivity to pick up on conceptual differences between the leadership skills in the simulation. Nonetheless, the secondary data set provided the overarching benefit of access to a large data set of millennial managers that played FLIGBY.

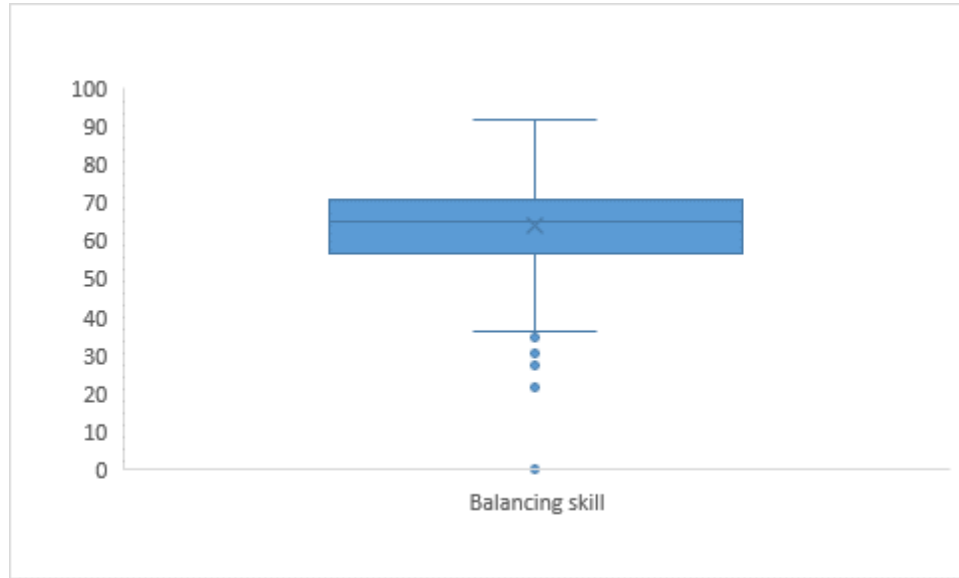
Several areas for future research could add to the findings of this study. A qualitative study could be developed to understand how leadership skills that promote flow in the workplace are best applied by leaders. The following additional quantitative studies could be developed to build on this study: (a) assessing another demographic to study differences between age groups, or (b) assessing males and females as groups of interest to investigating any gender differences.

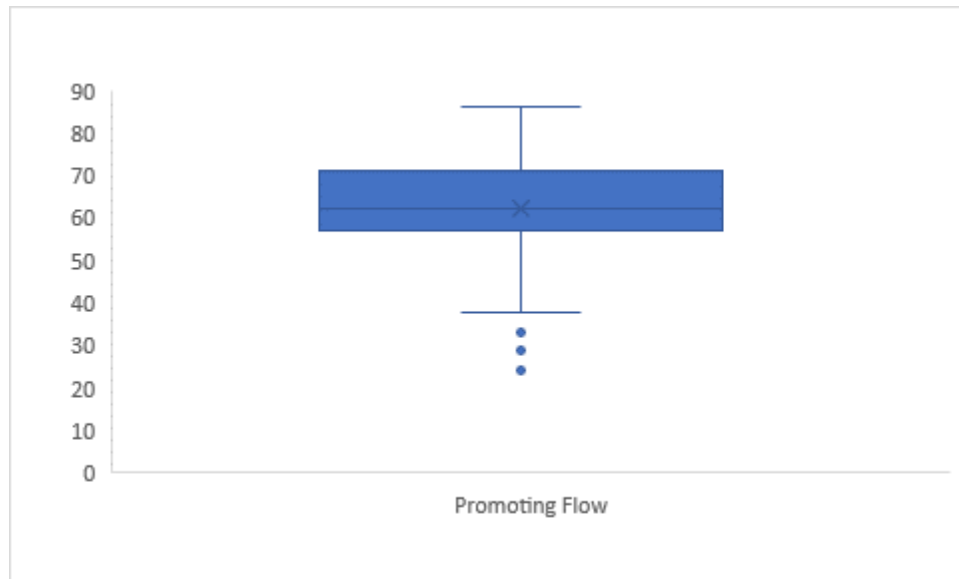
Conclusion

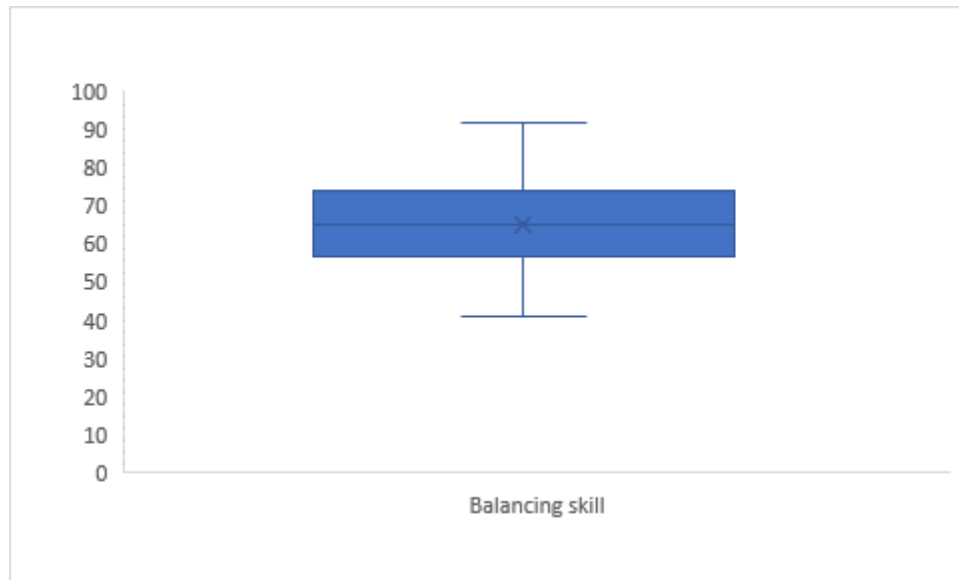
In summary, this study was significant in its contribution to the literature related to leadership skills, promoting flow, and generating profit. The study results were reinforcing the assumed relationships between the variables. In many ways, this research is timely as the prevalence of social enterprises increases, and the complexities of the socially influenced global

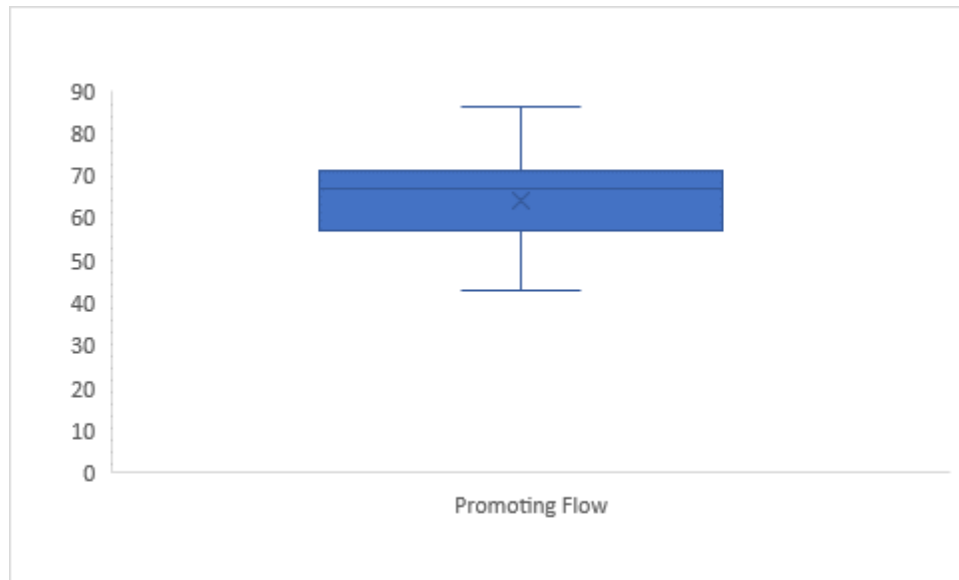
economy continue to drive business strategy (Volini et al., 2019). This study can provide a starting point for developing leaders of organizations focused on both its people and profit.

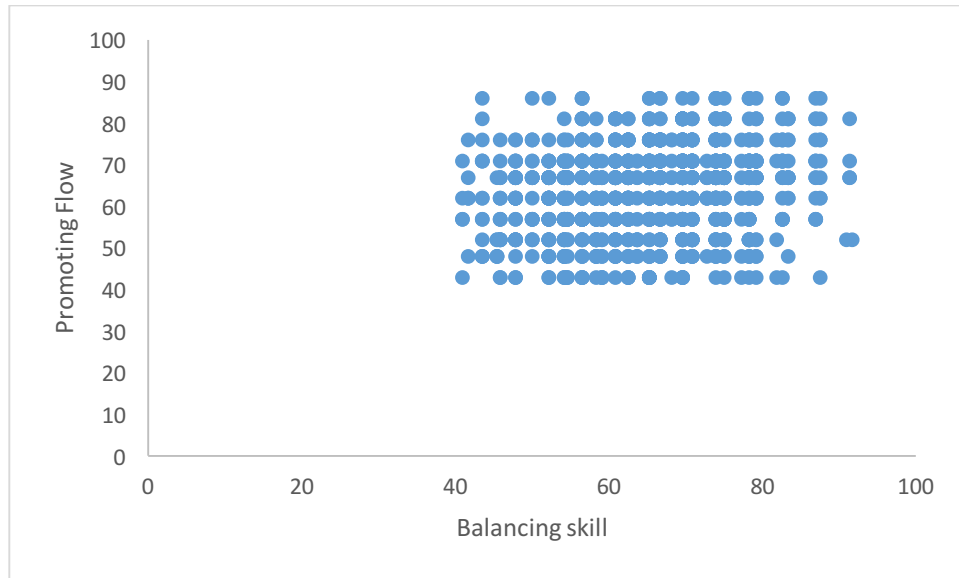
Given my experience working at a large, global organization within the talent management function, I was very attached to this study. I've learned that organizational change can be very difficult, especially when working cross-culturally and cross-regionally. Yet, this is the modern challenge as the workplace has evolved to global and dynamic environment where the capability for employees to work in new ways continues to increase. This is layered by the vast options available to select where and which company one wants to work for. For these few reasons, I know and see how critical it is for organizations to provide optimal workplace experiences for their employees – of course, whilst generating a profit, or else there is no business. It is my hope that this research will simplify the path which many organizations are taking to improve the workplace for their employees – my study aims to provide a guide of the skills to focus on when developing leaders to lead a social enterprise. I believe flow theory offers one of many approaches to meeting the needs of an organization's internal stakeholders. What I love, is that everyone can achieve a state of flow – which is such an optimal state.

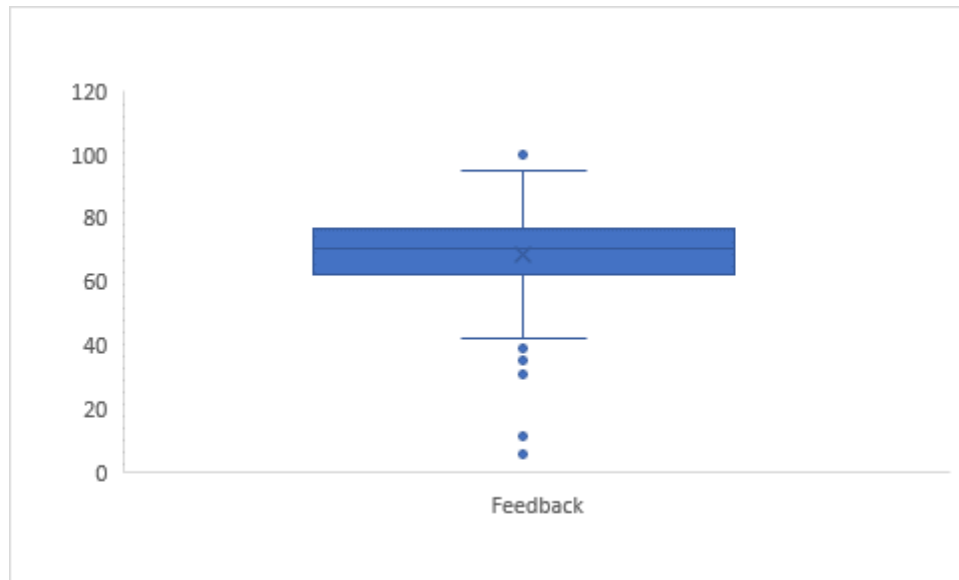
APPENDIX A: Boxplot of Balancing Skill Including Outliers

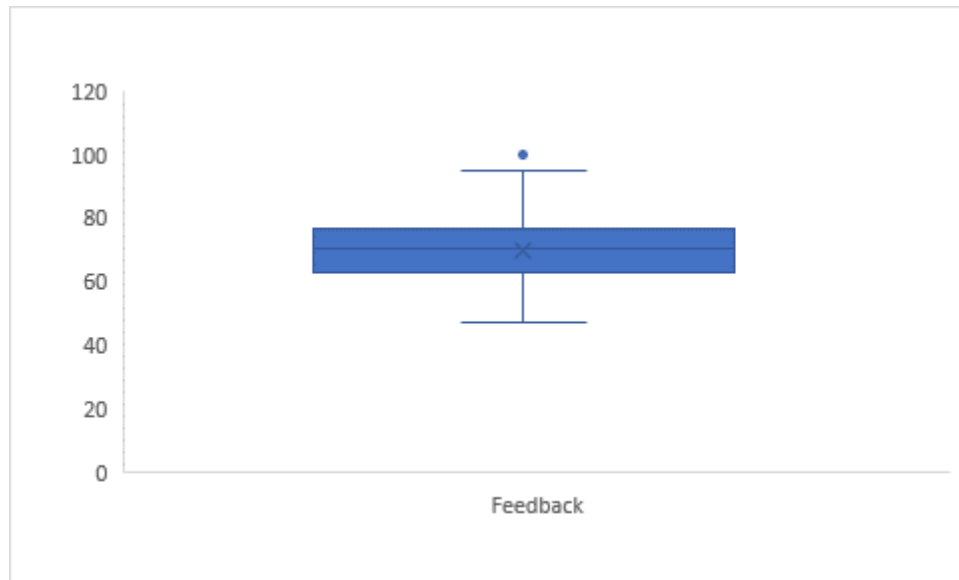
APPENDIX B: Boxplot of Promoting Flow Including Outliers

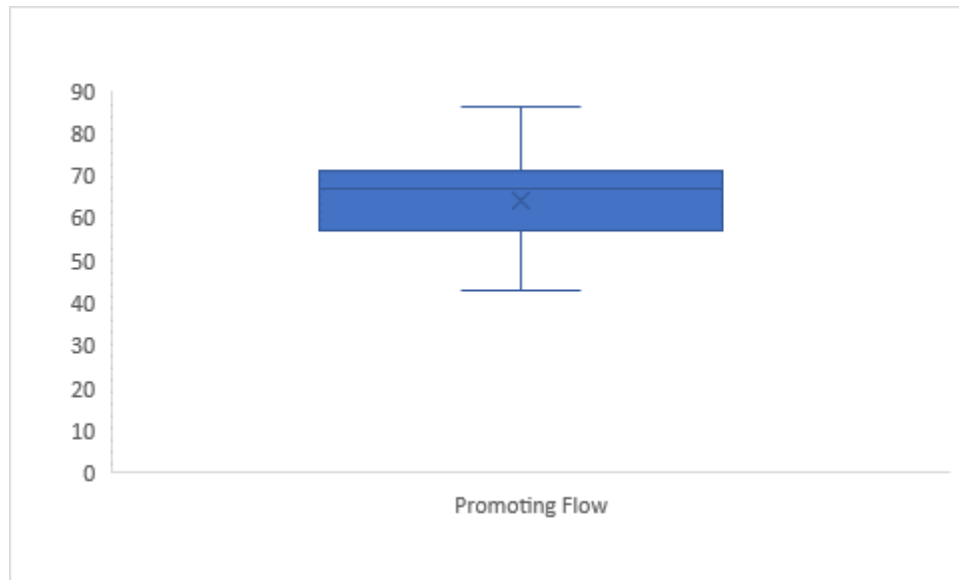
APPENDIX C: Boxplot of Balancing Skill Excluding Outliers

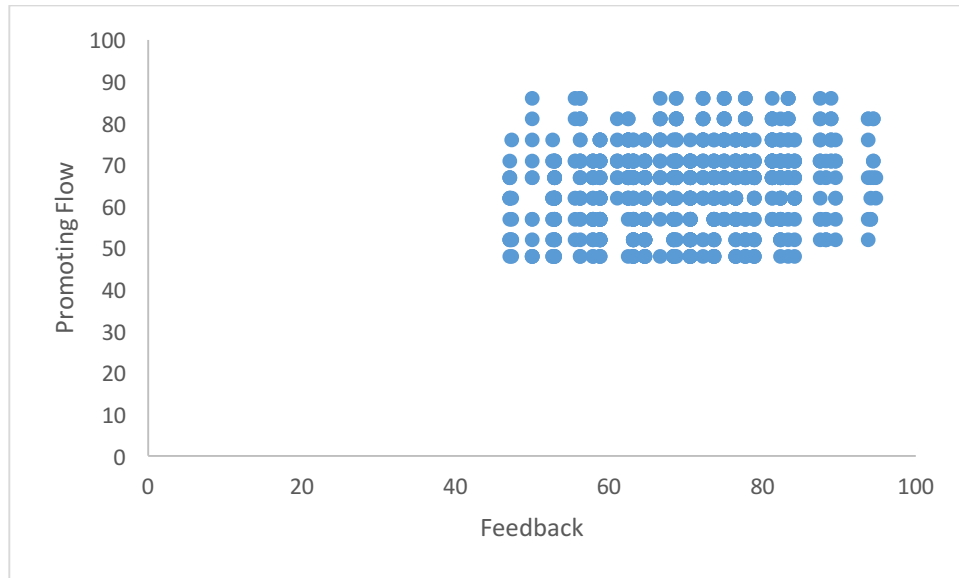
APPENDIX D: Boxplot of Promoting Flow Excluding Outliers

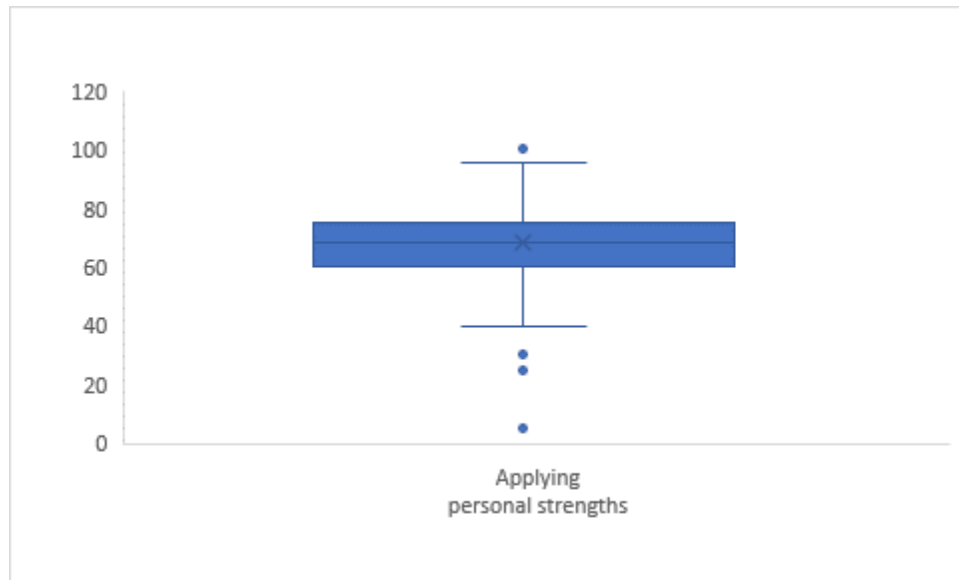
APPENDIX E: Scatterplot of Balancing Skill and Promoting Flow

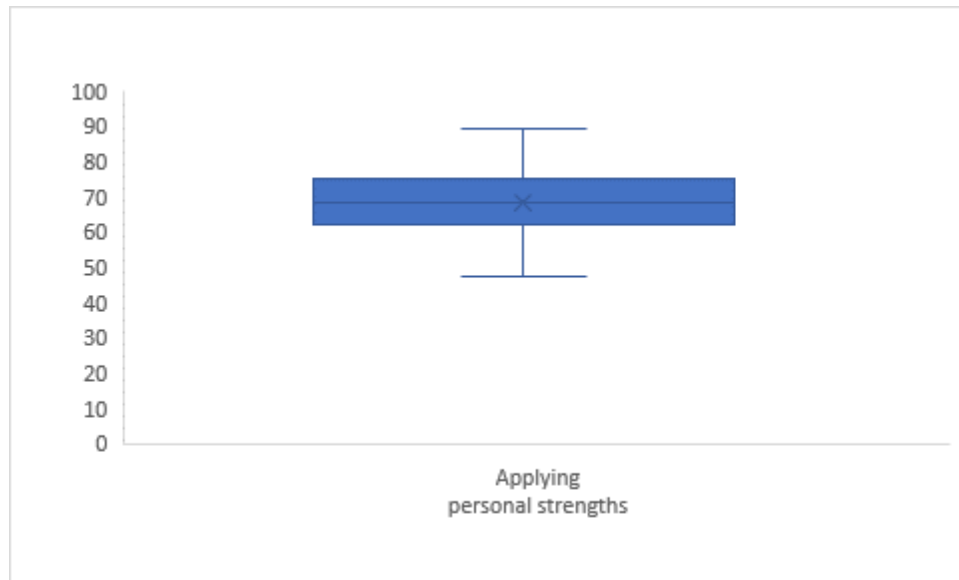
APPENDIX F: Boxplot of Feedback Including Outliers

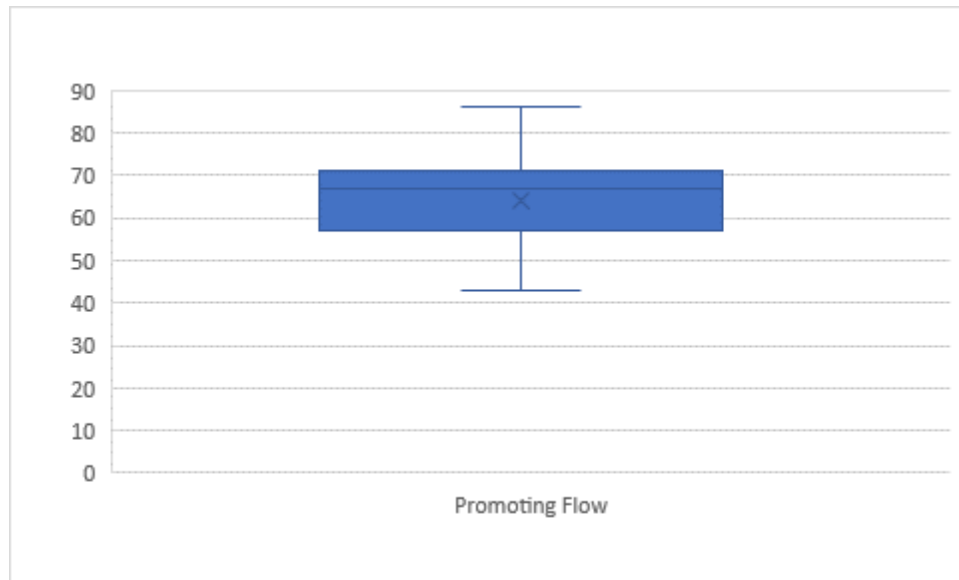
APPENDIX G: Boxplot of Feedback Skill Excluding Outliers

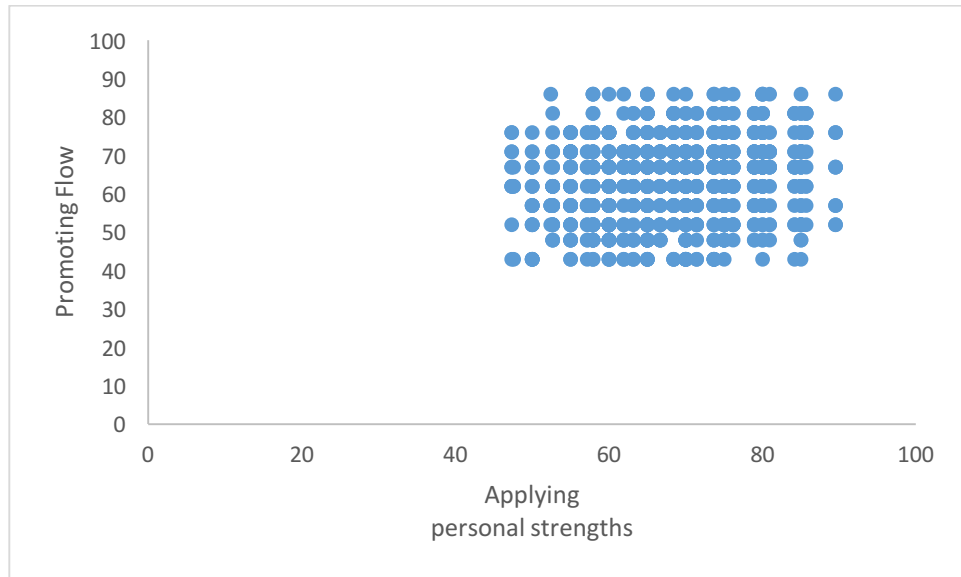
APPENDIX H: Boxplot of Promoting Flow Excluding Outliers

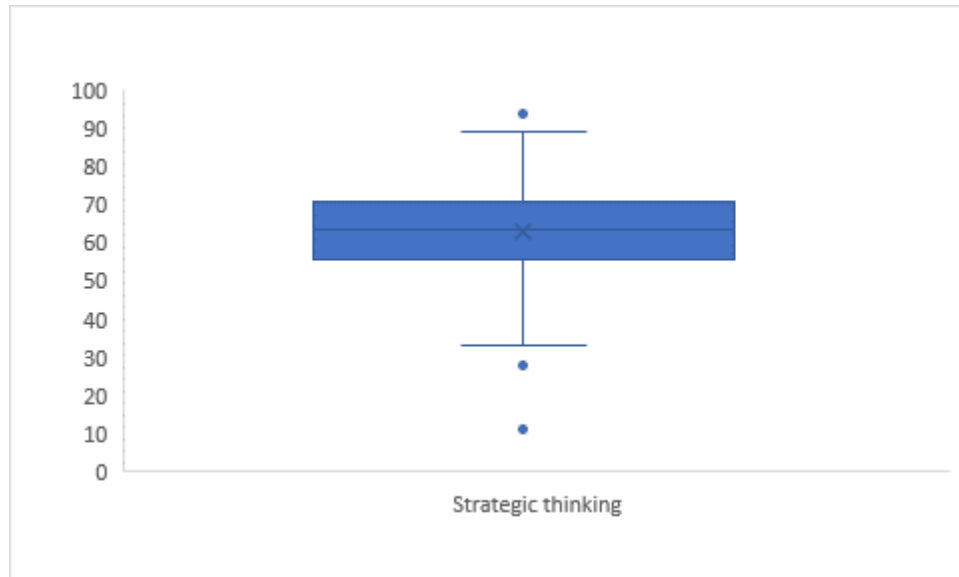
APPENDIX I: Scatter Plot of Feedback and Promoting Flow

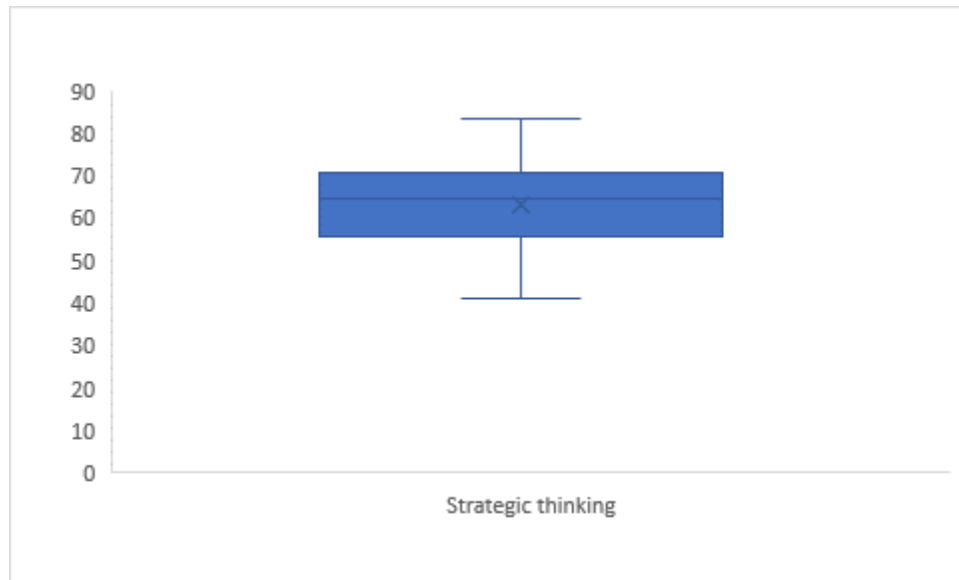
APPENDIX J: Boxplot of Applying Personal Strengths Including Outliers

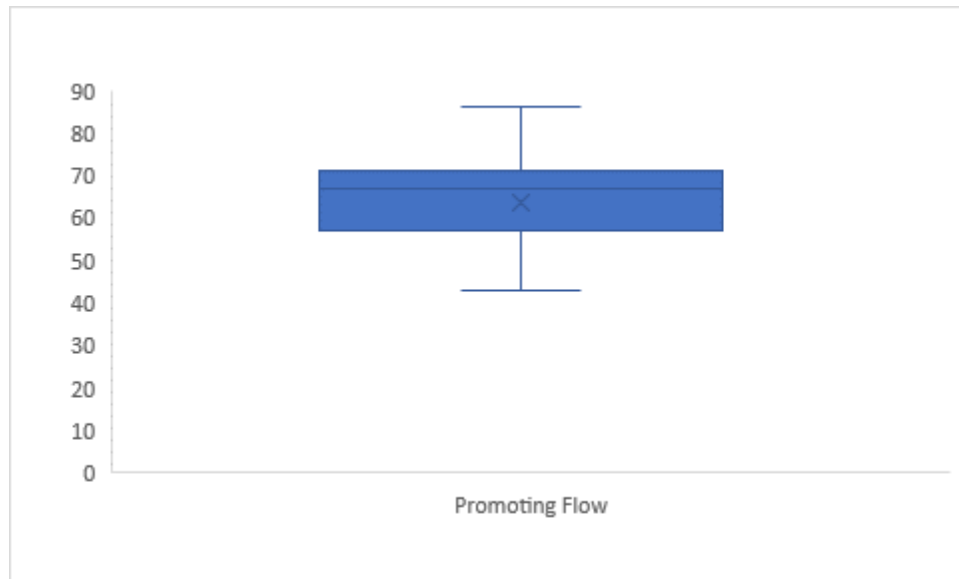
APPENDIX K: Boxplot of Applying Personal Strengths Excluding Outliers

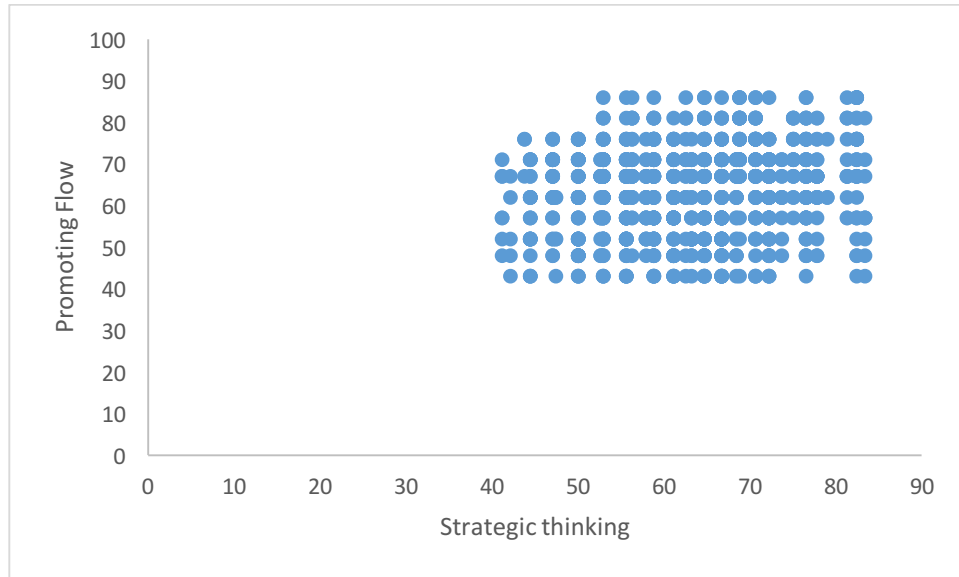
APPENDIX L: Boxplot of Promoting Flow Excluding Outliers

APPENDIX M: Scatter Plot of Applying Personal Strengths and Promoting Flow

APPENDIX N: Boxplot of Strategic Thinking Including Outliers

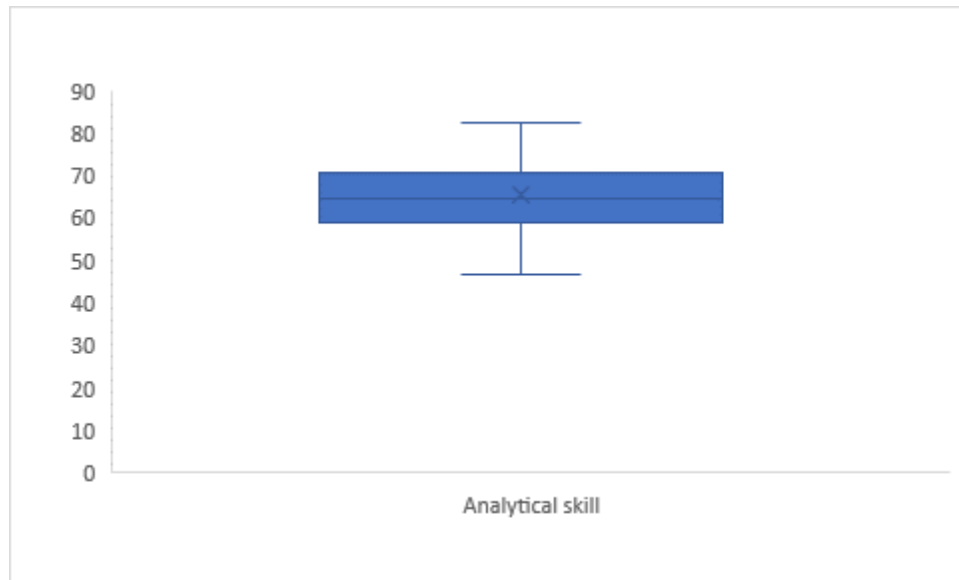
APPENDIX O: Boxplot of Strategic Thinking Excluding Outliers

APPENDIX P: Boxplot of Promoting Flow Excluding Outliers

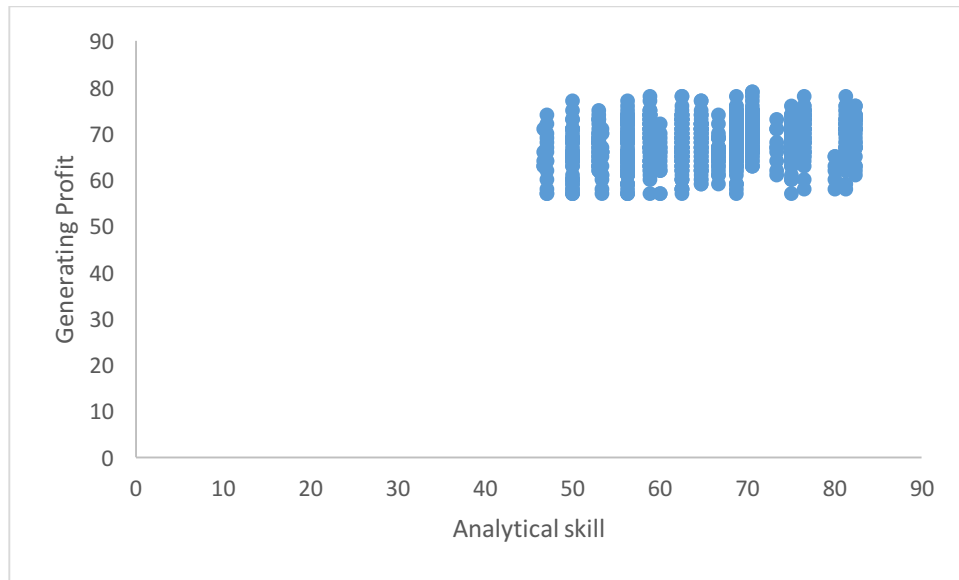
APPENDIX Q: Scatter Plot of Strategic Thinking and Promoting Flow

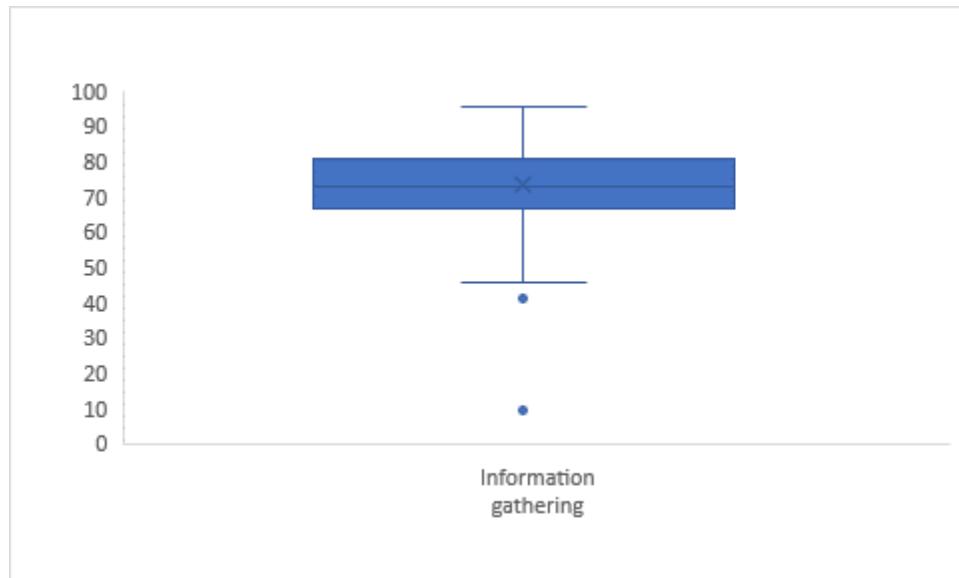
APPENDIX R: Boxplot of Analytical Skill Including Outliers

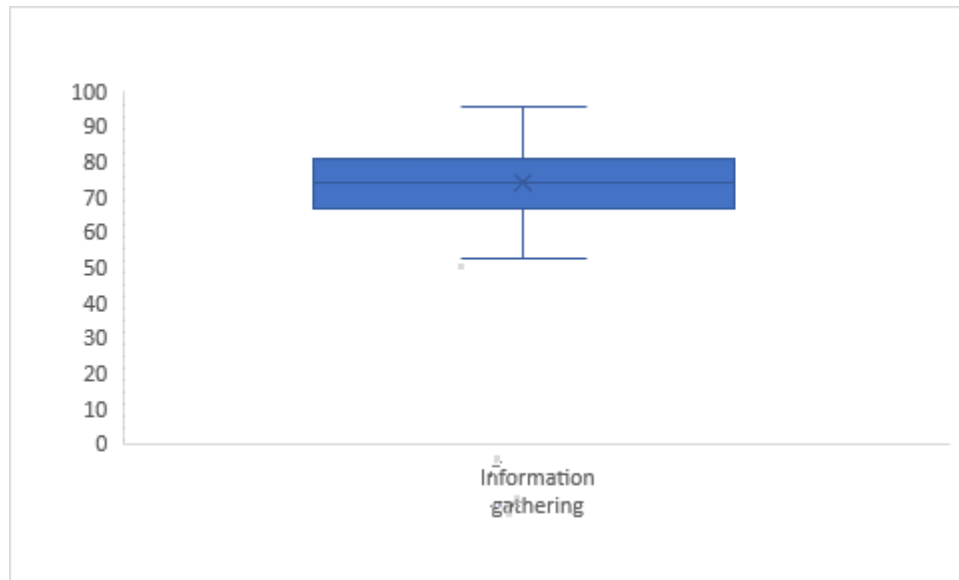
APPENDIX S: Boxplot of Generating Profit Including Outliers

APPENDIX T: Boxplot of Analytical Skill Excluding Outliers

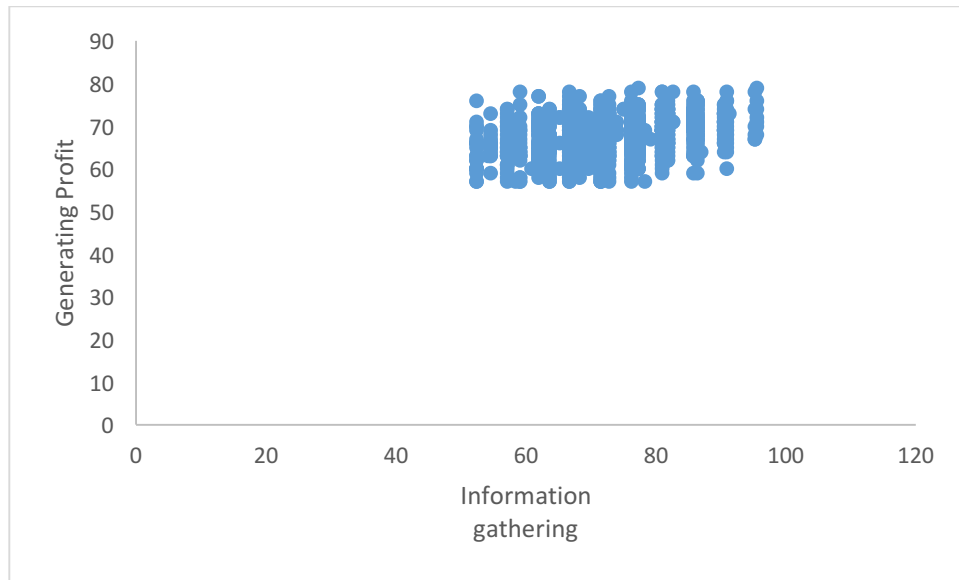
APPENDIX U: Boxplot of Generating Profit Excluding Outliers

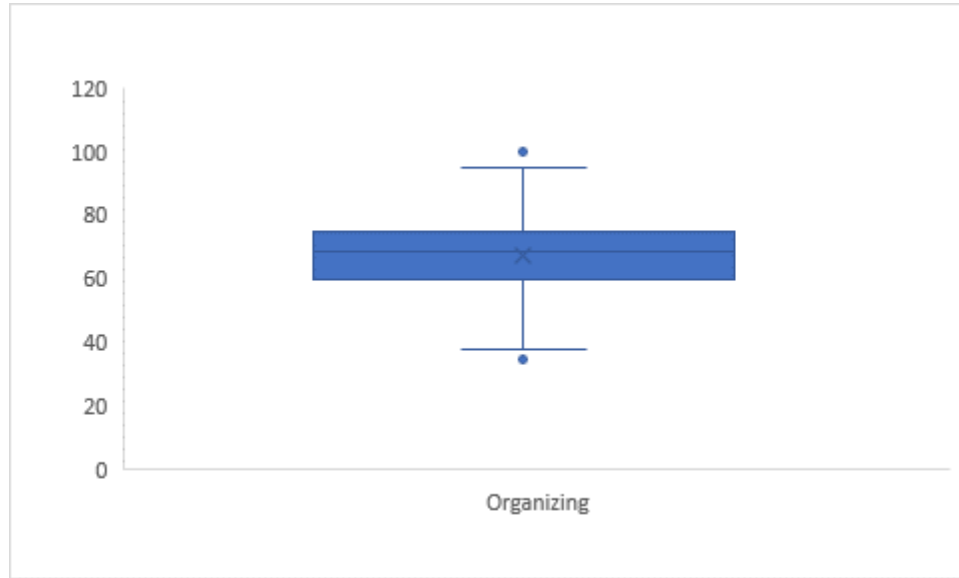
APPENDIX V: Scatter Plot of Analytical Skill and Generating Profit

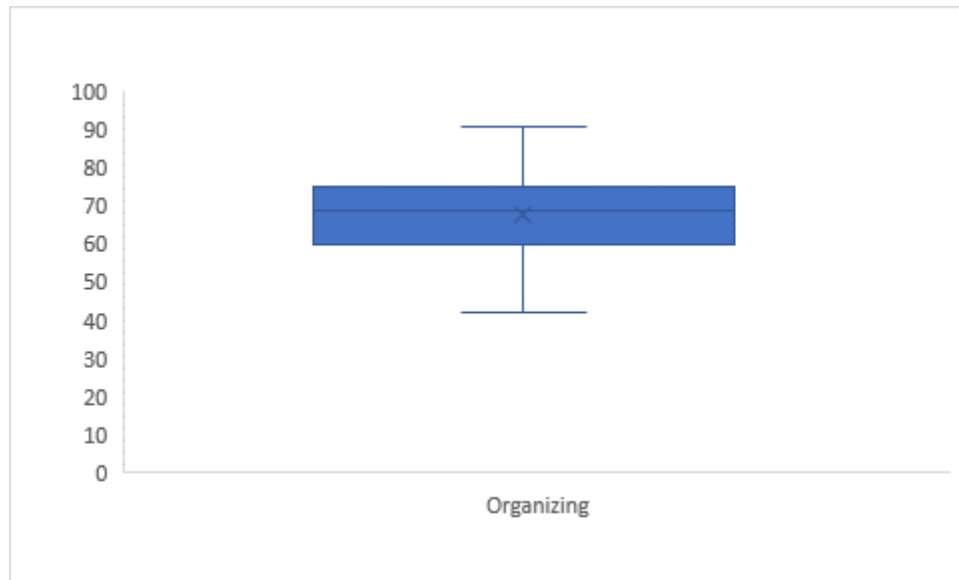
APPENDIX W: Boxplot of Information Gathering Including Outliers

APPENDIX X: Boxplot of Information Gathering Excluding Outliers

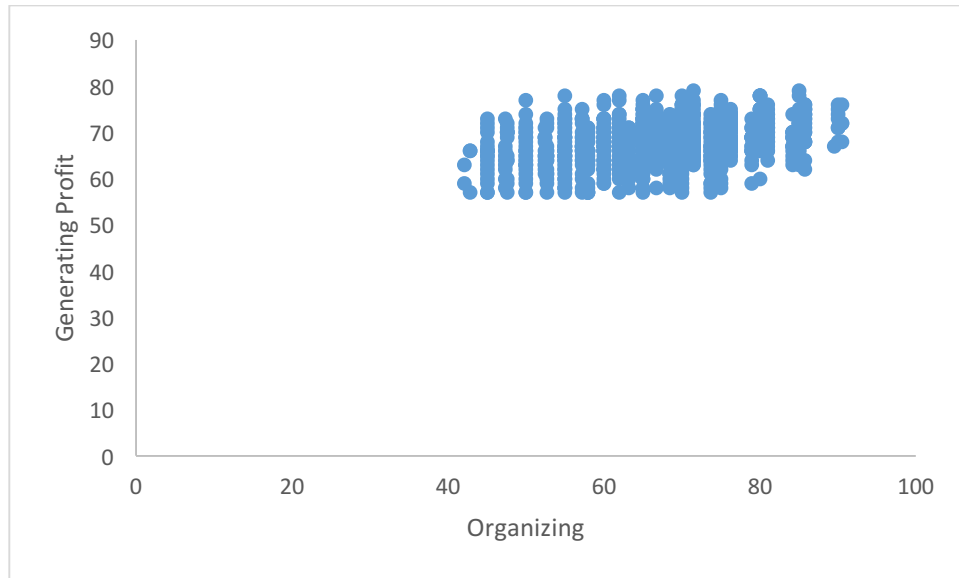
APPENDIX Y: Boxplot of Generating Profit Including Outliers

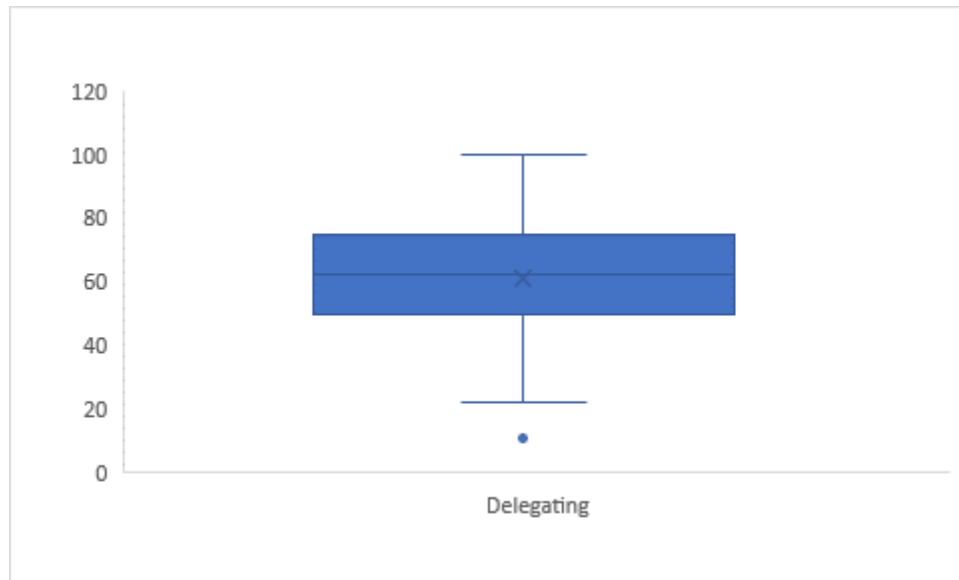
APPENDIX Z: Scatter Plot of Information Gathering and Generating Profit

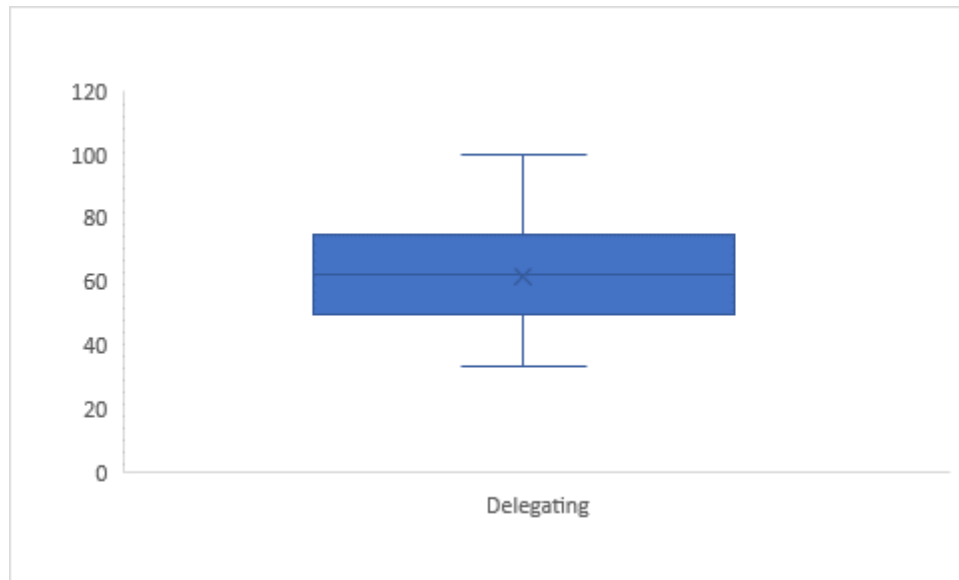
APPENDIX AA: Boxplot of Operating Including Outliers

APPENDIX BB: Boxplot of Operating Excluding Outliers

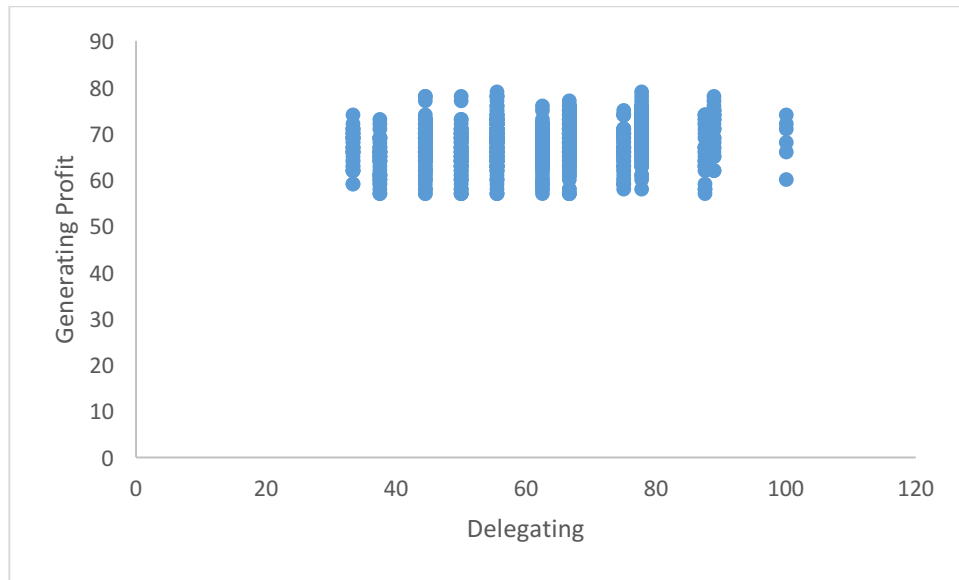
APPENDIX CC: Boxplot of Generating Profit Excluding Outliers

APPENDIX DD: Scatter Plot of Organizing and Generating Profit

APPENDIX EE: Boxplot of Delegating Including Outliers

APPENDIX FF: Boxplot of Delegating Excluding Outliers

APPENDIX GG: Boxplot of Generating Profit Excluding Outliers

APPENDIX HH: Scatter Plot of Delegating and Generating Profit

References

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